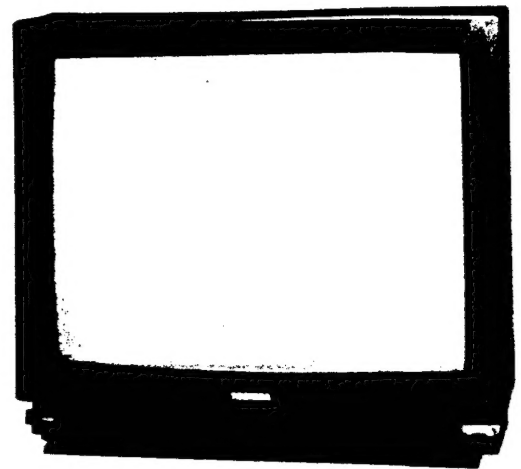


# TOSHIBA

## COLOUR TELEVISION

# 258S7G



### SPECIFICATIONS

Power Input Rating:	135 watts, AC 220 volts, 50 Hz
Aerial Input Impedance:	75 ohm unbalanced type for UHF
Receiving Channels:	VHF channels ..... channels E2 to E4. E5 to E12 and S1, S2 to S20 UHF channels ..... channels 21 to 69
Intermediate Frequencies:	Picture I-F carrier frequency ..... 38.9 MHz Sound I-F carrier frequency ..... 33.4 MHz Colour sub-carrier frequency ..... 34.47 MHz
Chassis Construction:	IC Solid State, Horizontal Chassis
Picture Tube:	25 in. A59EAK01X01, 590 mm (measured on diagonal of viewable picture area), 110° Deflection.
Sound Output:	10 watts x 2 (at 10% harmonic distortion), Max. 12 watts x 2
Speaker:	Woofer 120 mm round, 2 pcs. Tweeter 40 mm round, 2 pcs.
Aux Terminal:	Headphone Jack, 21 pin socket, 6 pin AV socket (DIN)
Cabinet:	Table type
Dimension:	Height ..... 520 cm Width ..... 580 cm Depth ..... 480 cm
Weight (Net):	36 kg

Specifications are subject to change without notice.

## SAFETY INSTRUCTIONS

**WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTION" AND THE "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW**

### X-RAY RADIATION PRECAUTION

- 1 The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 26.5 kV at zero beam current (minimum brightness) operating at 220V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 27.5 kV. When checking the E.H.T., use the 'High Voltage Check' procedure on page 5 in this manual using an accurate E.H.T. voltmeter.
- 2 The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
- 3 Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation. For continued safety, replacement component should only be made after referring the Product Safety Notice below

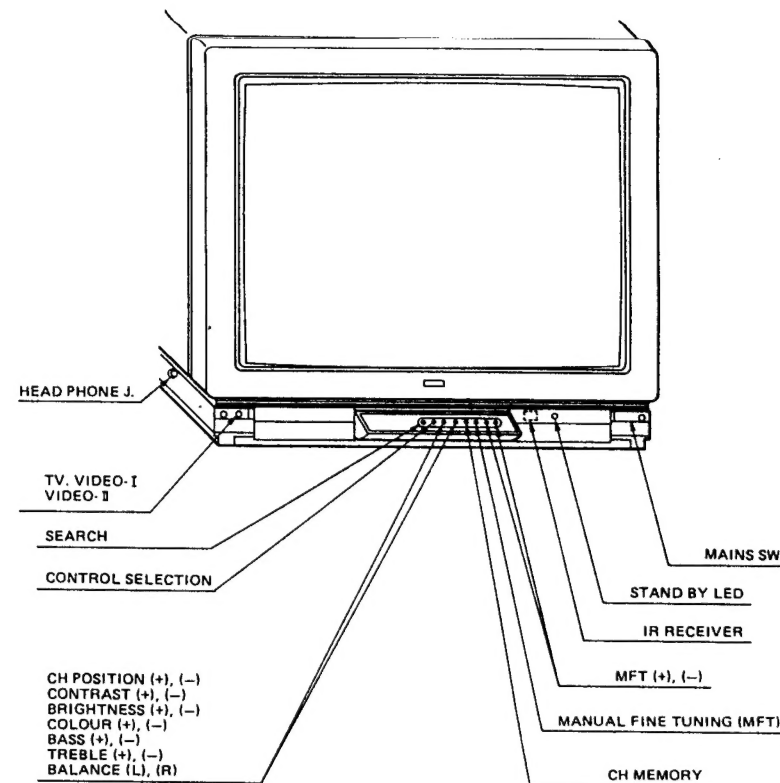
### SAFETY PRECAUTION

- 1 This receiver has a nominal working E.H.T. voltage of 24.5 kV. Extreme caution should be exercised when working on the receiver with the back removed. Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment. When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap. The C.R.T., if broken, will violently expel glass fragments and handling faulty or new C.R.T.'s should be carried out with extreme care. Do not hold the C.R.T. by the neck as this is a very dangerous practice.
- 2 A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
- 3 Replace blown fuses within the receiver with the fuse specified in the parts list.
- 4 When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
- 5 Keep wires away from high temperature components

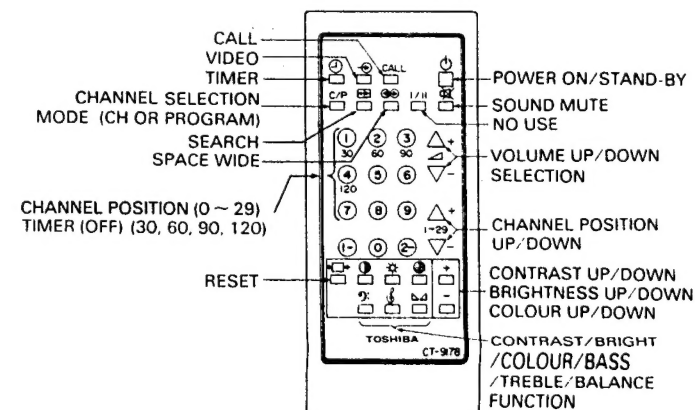
### PRODUCT SAFETY NOTICE

Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

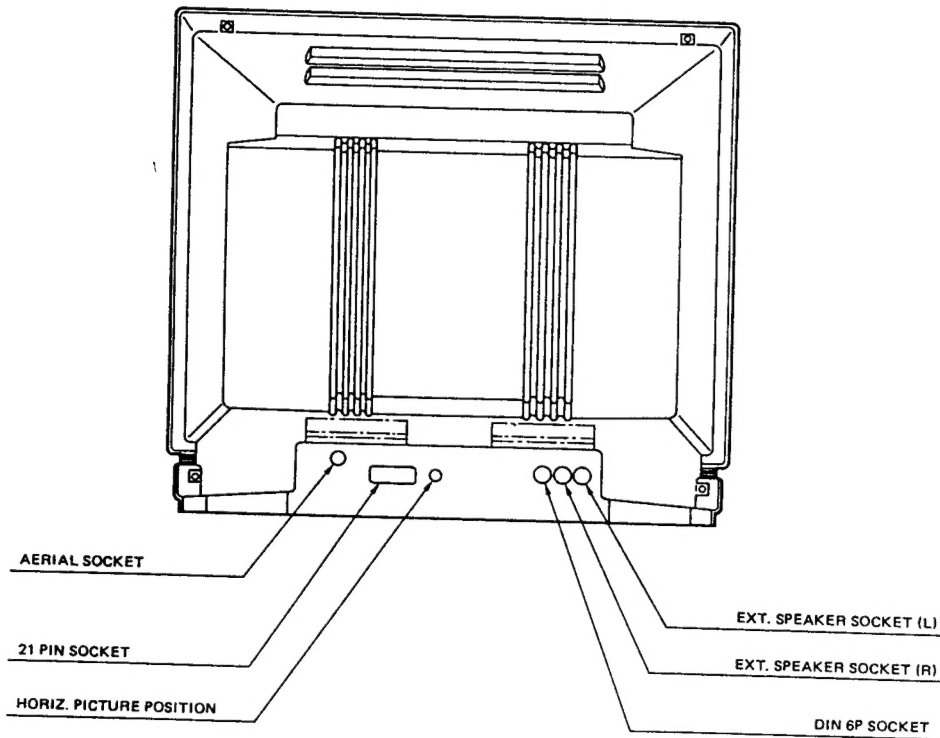
## FRONT CONTROLS VIEW



### Remote Hand Held Unit



## REAR VIEW



**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL

## INSTALLATION AND SERVICE ADJUSTMENTS

### GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials.

Plug the power cord into a convenient 220 volts 50Hz AC two pin power outlet.

Turn the receiver ON.

Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

### AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after Mains switch is switched ON. If the set is moved or faced in a different direction, the Mains switch must be switched off at least 10 minutes in order that the automatic degaussing circuit operates properly.

Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly with draw the coil to a distance of about 2 m before disconnecting it from AC source. If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

### HIGH VOLTAGE CHECK

**CAUTION:** There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

- 1 Connect an accurate high voltage meter to the second anode of the picture tube.
- 2 Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
- 3 High voltage will be measured below 27.5kV.
- 4 Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 27.5kV under any conditions.

### HORIZONTAL OSCILLATOR ADJUSTMENT

If there is an indication of unstable horizontal sync., adjust the HORIZONTAL HOLD Control (R451) to remove the condition. Adjust the HORIZONTAL HOLD to the centre of the pull-in range.

### VERTICAL OSCILLATOR ADJUSTMENT

If the picture moves up or down on the screen, adjust the VERTICAL HOLD Control (R351) until there is a single image without vertical movement.

### HEIGHT ADJUSTMENT

HEIGHT Control (R352) on MAIN Board changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

### FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS (T461) for well defined scanning lines in the centre area on the screen.

### DELAYED R-F AGC ADJUSTMENT

- 1 Tune the receiver in the strongest station in your area.
- 2 Turn AGC DELAY Control (R151) on Back Terminal Board to fully counterclockwise position.
- 3 Adjust AGC DELAY Control clockwise until noise (snow) is reduced to minimum on the picture.

### BELL COIL (LM51) ADJUSTMENT

- 1 Receive SECAM colour bar signal.
- 2 Connect the synchroscope to the terminal TPM-01.
- 3 Adjust LM51 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

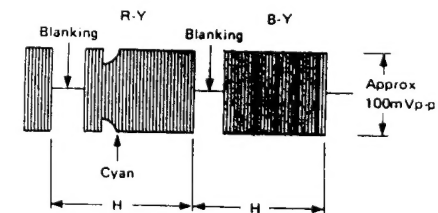


Figure 1.

## IDENT COIL (LM52) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 26 of ICM01.
3. Adjust LM52 for the maximum indication (approx DC10V) on the meter.

## B-Y, R-Y DEMODE COIL (LM53, LM54) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the pin 22 of ICM01.
3. Adjust LM53 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
4. Then change the connection of synchroscope from the pin 22 to the pin 18 of ICM01.
5. Adjust LM54 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

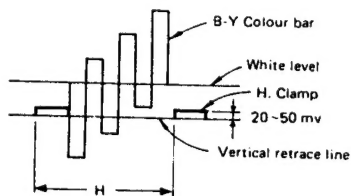


Figure 2.

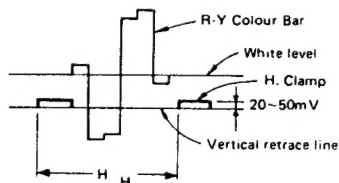


Figure 3.

## COLOUR SYNC. ADJUSTMENT

1. Tune in a colour programme (preferably colour bar signal) and warm up for five minutes.
2. Short circuit C512 on Main Board with a short jumper wire.
3. Connect pin 12 of IC501 to +12V line via a 10k ohm resistor, this will disable the colour killer.
4. Then the colour stripes appear on the screen when the adjustment is incorrect. Adjust the colour sync. VR (R552) so that the colour bar pattern stands still or drifts slowly across the picture screen.
5. Remove the 10k ohm resistor and jumper wire.

## PAL MATRIX ADJUSTMENT

1. Tune in the colour programme including the colour bar signals.
2. Set the COLOUR Control VR to obtain the proper colour.
3. If the PAL MATRIX adjustment is incorrect, the Venetian Blind effect would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind effect.

5. Next, connect the terminal TP-43 to the earth with a capacitor (30pF to 50pF). If the Venetian Blind increases, adjust 1H AMP ADJ. VR (R551) to minimize the Blind again.
6. Remove the capacitor, and if the Venetian Blind still remains, adjust DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures to adjust the R551 and L551 until the Blind does not appear when the capacitor is connected.

## CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Set the COLOUR Control to minimum.
3. Set the mode SW SA09 in the "TV" position.
4. Turn the SCREEN Control (on T461) fully counter clockwise.
5. By rotating the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) clockwise from the minimum, set them to the mid position.
6. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the mid position.
7. Remove the 2 pin jumper plug (MV11) on Back Terminal Board and short the pins of the sockets P530 and PV12.
8. Rotate the SCREEN Control gradually clockwise until the first horizontal line of a colour (RED, GREEN or BLUE) appears slightly on the screen. Set the SCREEN Control to this position. At the base of the colour, rotate the remaining two CUT OFF Controls gradually clockwise until the horizontal lines of each colour appear slightly on the screen. Adjust the CUT OFF Controls to obtain the slightly lighted (RED, GREEN and BLUE). The lines may look like white if the CUT OFF Controls are adjusted properly.
9. Return the 2 pin plug (MV11) to pins (PV11) and remove shortage of P530 and PV12.
10. Rotate the BRIGHTNESS and CONTRAST Controls to the maximum.
11. Adjust the BLUE and GREEN DRIVE Controls (R252, R253) to obtain proper white-balanced picture in high light areas.
12. Rotate the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas.

## SUB-BRIGHTNESS ADJUSTMENT

1. The Tune in a colour programme.
2. Set the CONTRAST Control to the maximum and the BRIGHTNESS Control to the centre (click position).
3. Set the COLOUR Control to the centre.
4. Set the SUB-BRIGHT Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the Controls turned to the maximum, adjust the SUB-BRIGHT Control again for the acceptable picture.

## GENERAL ALIGNMENT INSTRUCTIONS

### 1 GENERAL

The alignment procedures described below should only be used when absolutely necessary. The test equipment, alignment procedures and bias values specified must be used to ensure the correct operation of the television receiver.

### 2 EQUIPMENT TERMINATION

The alignment pads and probes have been designed to give optimum results when used with the specified test equipment. Incorrect matching will produce distorted waveforms or voltages making accurate alignment impossible. To avoid stray pick-up, when constructing pads and probes, keep any unshielded leads below 2.5 cm in length.

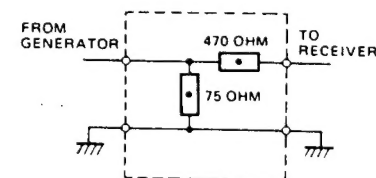
### 3 SIGNAL OVERLOADING

When using the sweep generator, keep the output as low as possible to avoid overloading. To check for this condition, turn the sweep generator output to minimum and then gradually increase the level until a response is obtained. If the level is then increased further, it should only change the amplitude and not the configuration of the response. If the response begins to flutter at the top or to drop below the base line, decrease the sweep generator output to restore the correct configuration of the response.

The oscilloscope gain should be as high as possible to maintain a usable pattern with the peak to peak values stated. This procedure will allow the sweep generator output to be kept low and thus avoid overloading. If 'markers' from a marker generator are inserted, the response should not be distorted.

### 4 TEST EQUIPMENT REQUIRED

1. Wide Band Oscilloscope
2. Colour Bar/Dot/Crosshatch Generator
3. TV Sweep and Marker Generator
4. High Impedance Voltmeter or DVM (Digital Volt Meter)
5. Multimeter
6. AGC Bias Supply (12V, 300 mA)
7. Direct Low Capacitance Probe
8. Matching Pad (See the figure below)
9. External Degaussing Coil
10. Microscope, 10 or 12 times magnification (approximately), to allow observation of the dot structure of the CRT



Matching Pad



## PICTURE I-F TRAP ALIGNMENT

- NOTE** ..... Perform this adjustment prior to I-F SWEEP and AFC ALIGNMENTS.  
**GENERAL** ..... Refer to Figure 4 for the equipment connection.  
**PRELIMINARY STEPS** .....  
 1. Disconnect the solder link SL-1 (see Figure 4) on the foil side of the Back Terminal Board.  
 2. Supply +12 volts to the Back Terminal Board.  
 3. Supply +8 volts bias to terminal "TP-14" on the Back Terminal Board.  
 4. Turn AGC DELAY Control (R151) on the Back Terminal Board fully clockwise.  
**SWEEP/MARKER GENERATOR** ..... Connect to the point (d) as shown in Figure 4 on the Back Terminal Board.  
**OSCILLOSCOPE** ..... Connect through the detector probe (See Figure 6.) to the collector of Q161 on the Back Terminal Board.

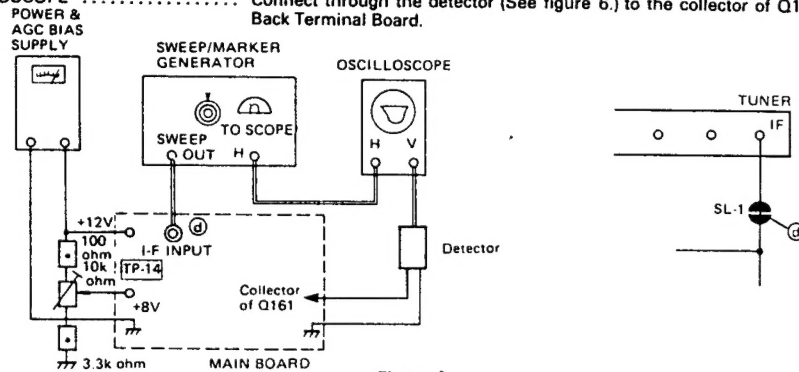


Figure 4.

STEP	SWEEP/MARKER GENERATOR	ADJUST	PROCEDURE
<b>TRAP ALIGNMENT</b>			
Control the sweep output for easy alignment. (See Figure 5.) Set the IF makers for 40.9MHz (P + 2.0MHz).			
Trap coil L107	40.9MHz Marker "ON"	L107	Adjust L107 so the 40.4MHz marker point is placed at bottom of response. (See Figure 6.)



Figure 5. Trap Response

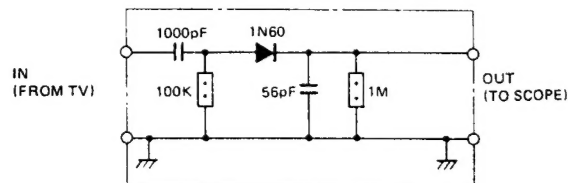


Figure 6. Detector Diagram

## PICTURE I-F SWEEP ALIGNMENT

- GENERAL** ..... Refer to Figure 7 for test equipment connection.  
**PRELIMINARY STEPS** .....  
 1. Disconnect the solder link SL-1 (see Figure 7) on the foil side of the Back Terminal Board.  
 2. Supply +12 volts to the Back Terminal Board.  
 3. Supply adjustable bias to the pin 6 of IC101 on the Back Terminal Board.  
 4. Turn AGC DELAY Control (R151) on the Back Terminal Board fully clockwise.  
**SWEEP/MARKER GENERATOR** ..... Connect to the point (d) as shown in Figure 7 on the Back Terminal Board.  
**OSCILLOSCOPE** ..... Connect through the detector probe to the pin 28 of IC101 on the Back Terminal Board.

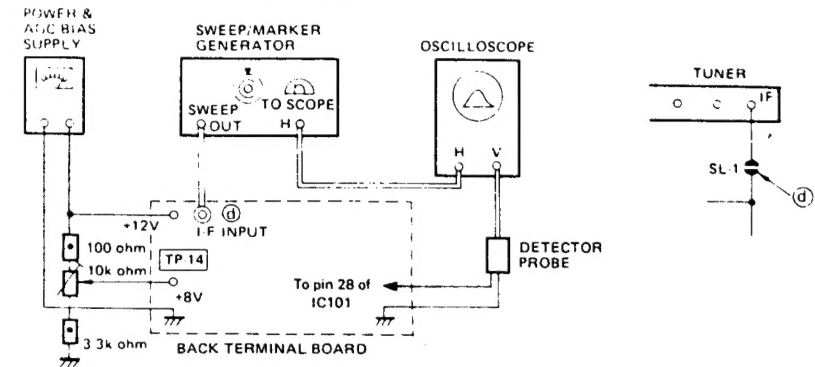


Figure 7. Picture I-F Sweep Alignment

STEP	SWEEP/MARKER GENERATOR	ADJUST	REMARKS
<b>L103 ALIGNMENT</b>			
Set Oscilloscope gain for 0.1 v/cm. Adjust sweep output for easy alignment. (See Figure 8.)			
Detector Coil (L103)	38.9MHz Marker "ON"	L103	<ul style="list-style-type: none"> <li>Connect a capacitor 10μF to pin 25 of IC101 and ground for adjustment.</li> <li>Set the bias voltage of pin 6 of IC101 for the 2Vpp response at the pin 28 of IC101.</li> <li>Adjust L103 so that the reference OSC frequency moves just on the marker frequency (38.9 MHz) with the zero-beat response. See Figure 8.</li> </ul>
After completing the above steps, disconnect the equipment and re-solder the solder links. Switch on the receiver, and adjust the AGC Delay control (R151) following DELAYED R-F AGC ADJUSTMENTS.			

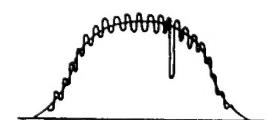
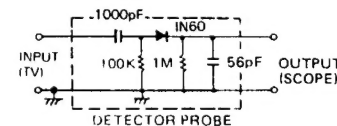


Figure 8. Adjusted Response with Zero-Beat

## AFC ALIGNMENT

- GENERAL ..... Refer to Figure 9 for test equipment connection.
- PRELIMINARY STEPS ..... 1. Disconnect the solder link SL-1 ( see Figure 9) on the foil side of the Back Terminal Board.
2. Supply +12 volts to the Back Terminal Board.
3. Turn AGC DELAY Control (R151) on the Back Terminal Board fully clockwise.
4. Disconnect the connector (M516A) on the Back Terminal Board.
5. No external bias supply is required.
- DVM ..... Connect to pin 16 of IC101 and ground.

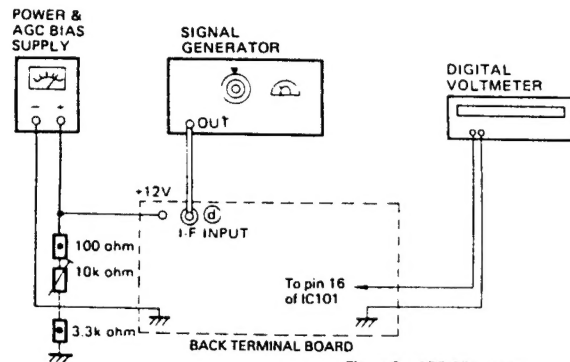
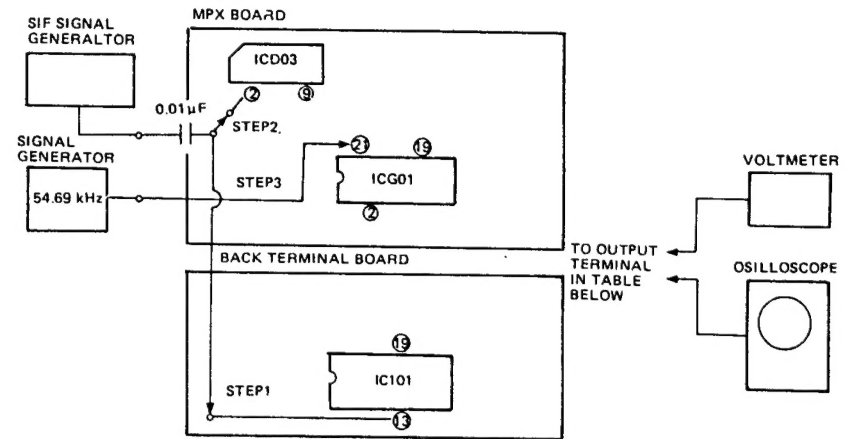


Figure 9. AFC Alignment

STEP	SIGNAL GENERATOR	ADJUST	REMARKS
1 AFC Balance	NO SIGNAL	R152	<ul style="list-style-type: none"> <li>Short the pin 6 of IC101 to ground</li> <li>Adjust R152 for 4.3V at pin 16 of IC101.</li> <li>After the adjustment, remove the shorting at pin 6 of IC101.</li> </ul>
2 AFC Detector	38.9 MHz CARRIER WAVE	L171	<ul style="list-style-type: none"> <li>Connect IF carrier wave (60 dBμ or more) to the point ① in Figure 9.</li> <li>Adjust L171 for 4.3V at pin 16 of IC101.</li> </ul>
After completing the above steps, disconnect the equipment and re-solder the solder links Check AFC operation is normal. Readjust AGC DELAY control (R151) following DELAYED R-F AGC ADJUSTMENTS			

## SIF ALIGNMENT



STEP	ADJUSTING PARTS	INPUT TERMINAL	OUTPUT TERMINAL	TEST SIGNAL	PROCEDURE
1	5.5 MHz SIF DET. COIL (L634)	PIN13 (IC101)	PIN19 (IC101)	Input level: 80 to 100 dBμ f = 5.5 MHz fm = 1 kHz Δf = ±15 kHz	1. Connect the signal to pin 13 of IC101 on Back Terminal Board through a capacitor 0.01 μF. 2. Arrange IF Signal as described Left. 3. Connect voltmeter to pin 19 of IC101. 4. Adjust L634 for the maximum reading on voltmeter.
2	5.74 MHz SIF DET. COIL (LD05)	PIN2 (ICD03)	PIN9 (ICD03)	Input level: 80 to 100 dBμ f = 5.742 MHz fm = 1 kHz Δf = ±15 kHz	1. Connect the signal to pin 2 of ICD03 on Back Terminal Board through a capacitor 0.01 μF. 2. Arrange the IF signal as described Left. 3. Connect voltmeter to pin 9 of ICD03. 4. Adjust LD05 for the maximum reading on voltmeter.
3	54.7 kHz PILOT ADJ. (ICG01)	PIN21 (ICG01)	PIN19 (ICG01)	Pilot Signal Input level: 100mVp-p f = 54.69 kHz	1. Arrange the signal as described Left. 2. Connect oscilloscope to pin 19 of ICG01. 3. Adjust LG01 for the minimum amplitude of 54.69 kHz element.
4	STEREO SEPARATION (RG51)	Aerial (E-12ch)	PIN2 (ICG01)	Receiver E-12ch (STEREO Signal)	1. Receive E-12ch on TV receiver. 2. Connect oscilloscope to pin 2 of ICG01. 3. Adjust RG51 for the minimum amplitude of 1 kHz element.

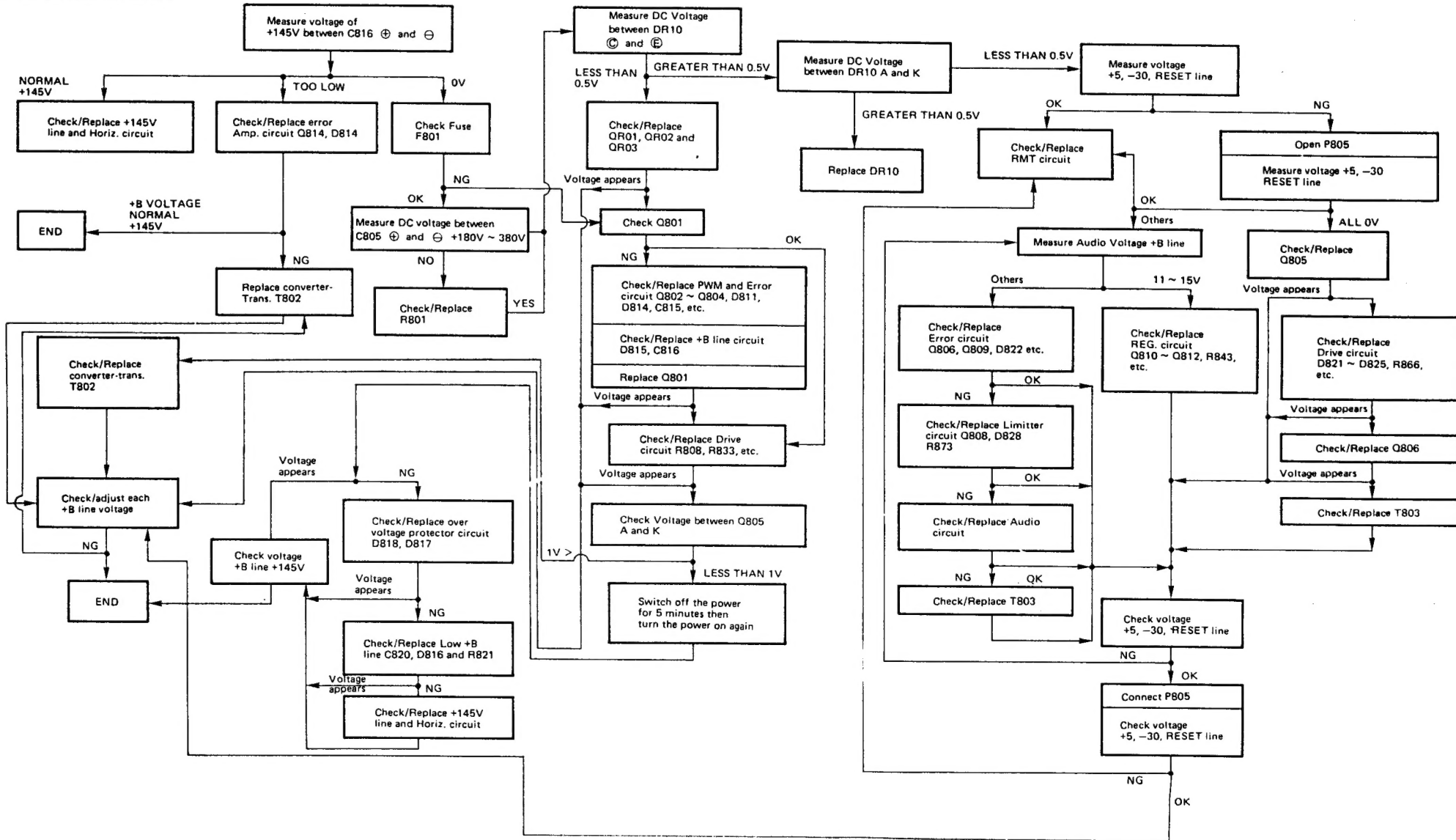
## TROUBLESHOOTING CHARTS

The following charts are devoted to troubleshooting which, if followed carefully, will assist you in tracking down a fault to the correct stage.

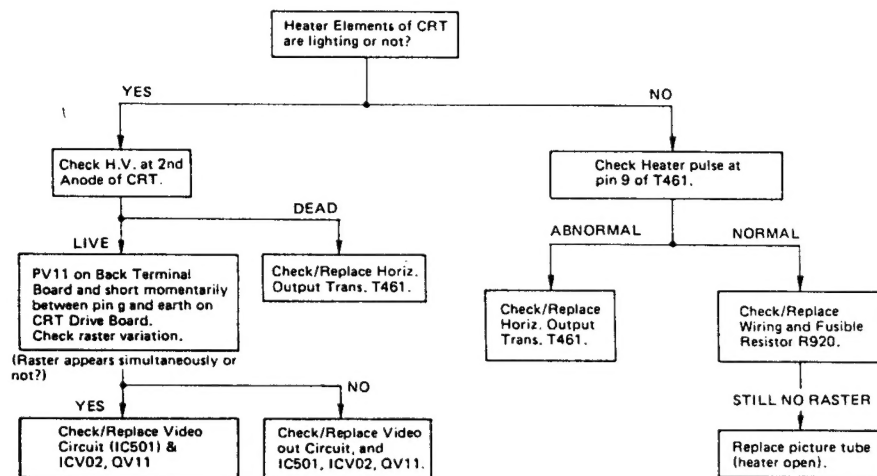
In order to utilize the charts (fault trees), firstly establish the complaint, i.e. – No Raster, No Sound.

Locate the chart applicable and then progress through the various alternatives until a final block indicates the offending components or stage.

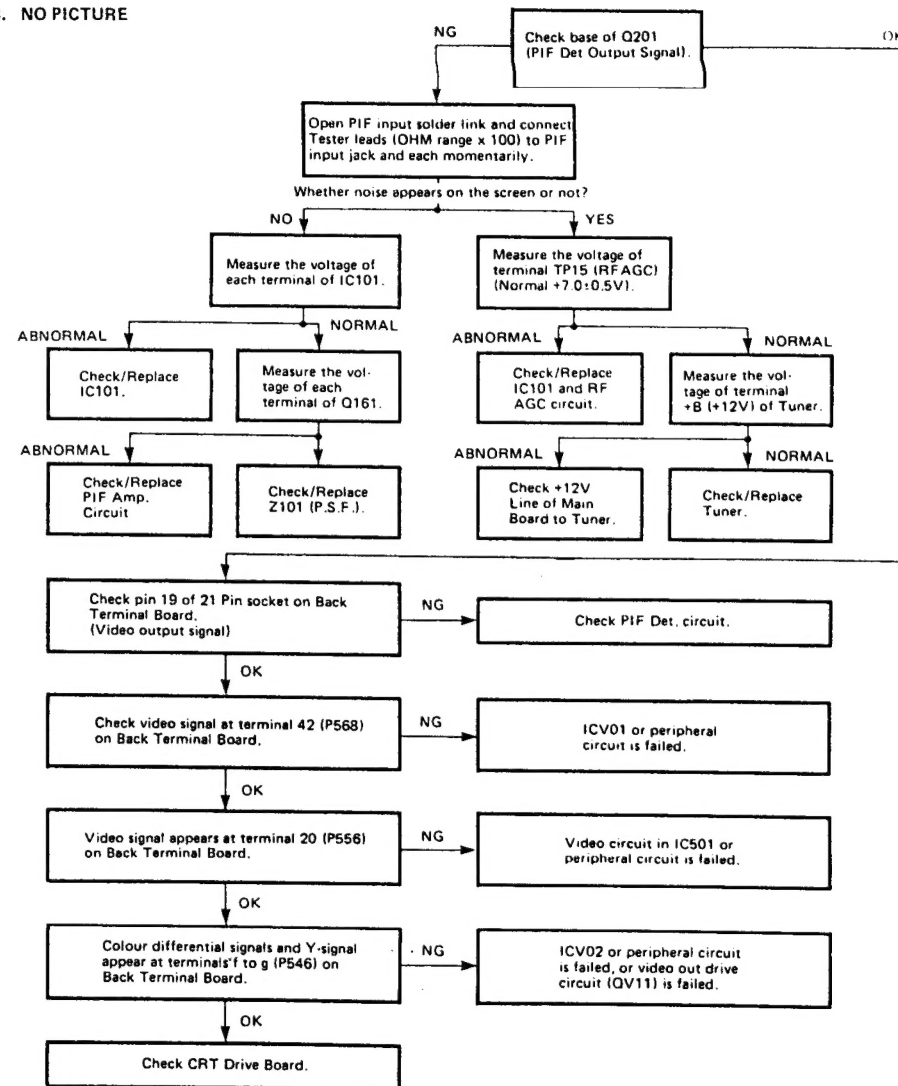
## 1. NO RASTER AND NO SOUND



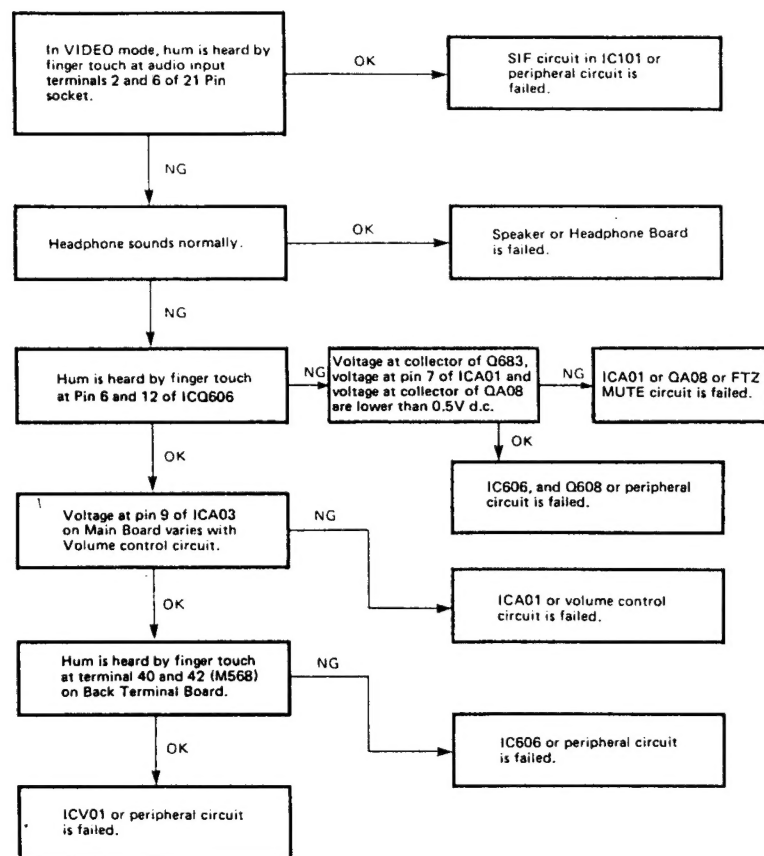
## 2. NO RASTER (SOUND OK)



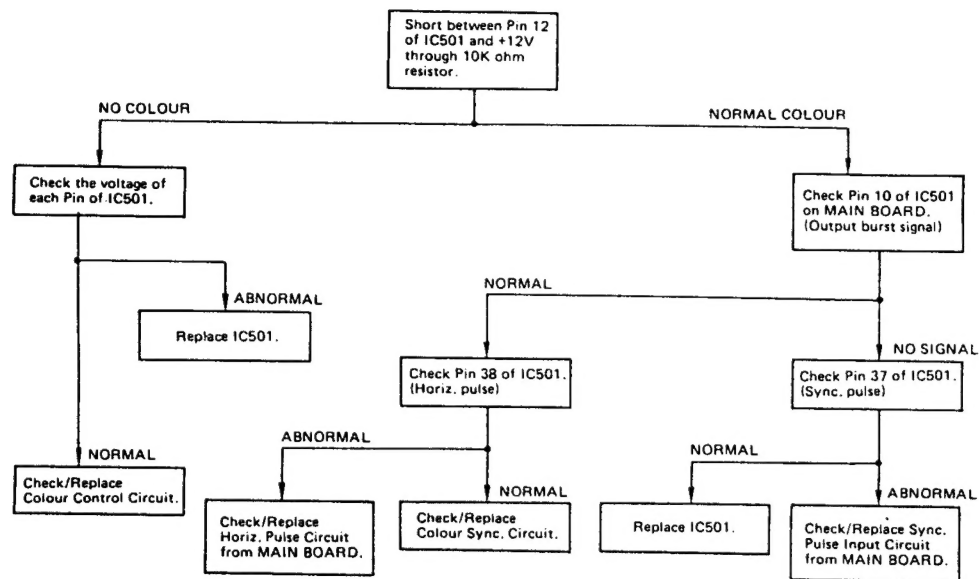
## 3. NO PICTURE



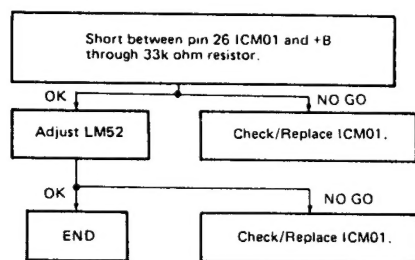
#### 4. NO SOUND



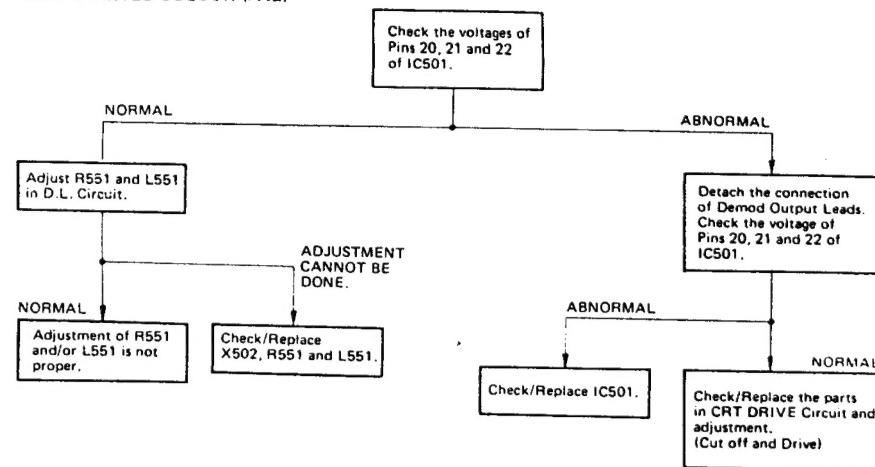
## 5. NO COLOUR (PAL)



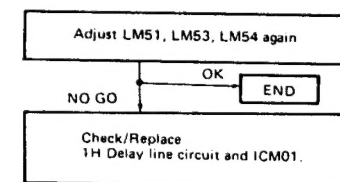
## NO COLOUR (SECAM)



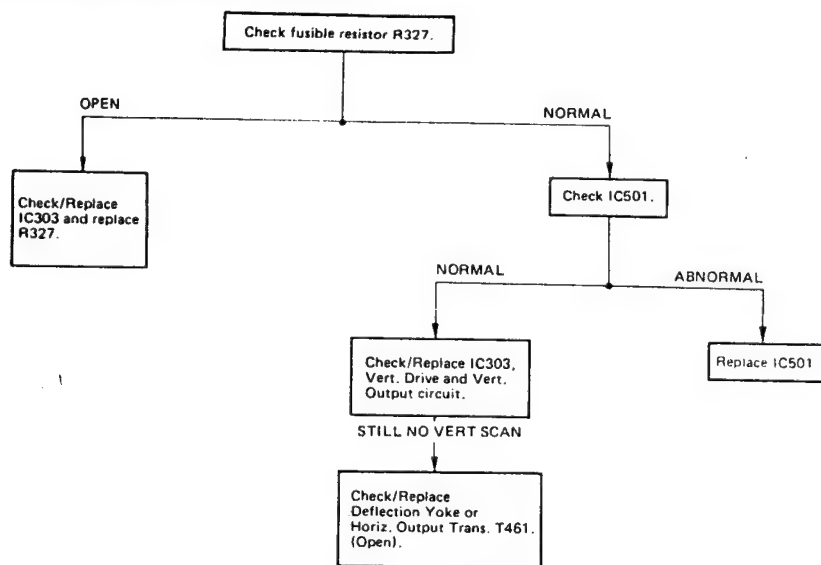
## 6. SPECIFIC TINTED COLOUR (PAL)



## • SPECIFIC TINTED COLOUR (SECAM)



## 7. NO VERT. SCAN (ONE HORIZ. LINE RASTER)



## 8. OUT OF VERT. SYNC. AND HORIZ. SYNC.

Check/Replace Sync. Circuit from pin 40 of IC501 to pin 37 or IC501.

## 9. OUT OF VERT. SYNC.

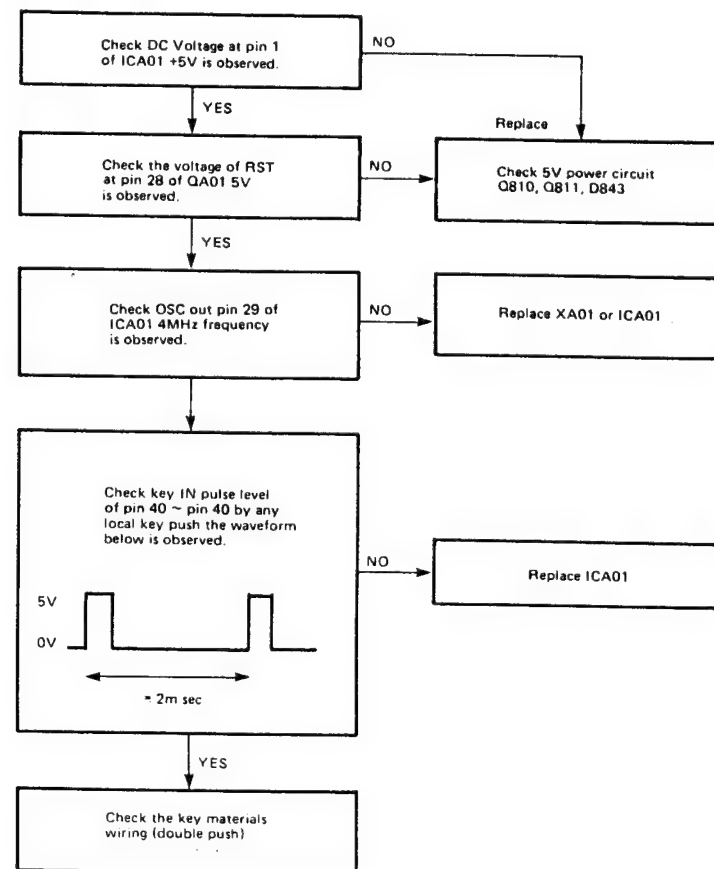
Check/Replace Vert. OSC Circuit and Vert. Hold Circuit connected to Pins 26, 27 and 29 or IC501  
Check/Replace IC501.

## 10. OUT OF HORIZ. SYNC.

Check/Replace Horiz. OSC Circuit, Horiz. Hold and Horiz. AFC Circuit connected to Pins 23 and 34 of IC501. Check/Replace IC501.

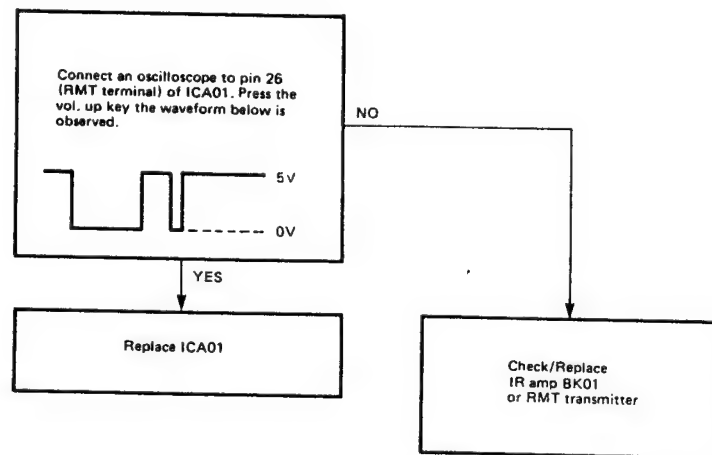
## 11. CHANNEL SELECTOR TROUBLE

(1) Can not be controlled by any local and any RMT key.

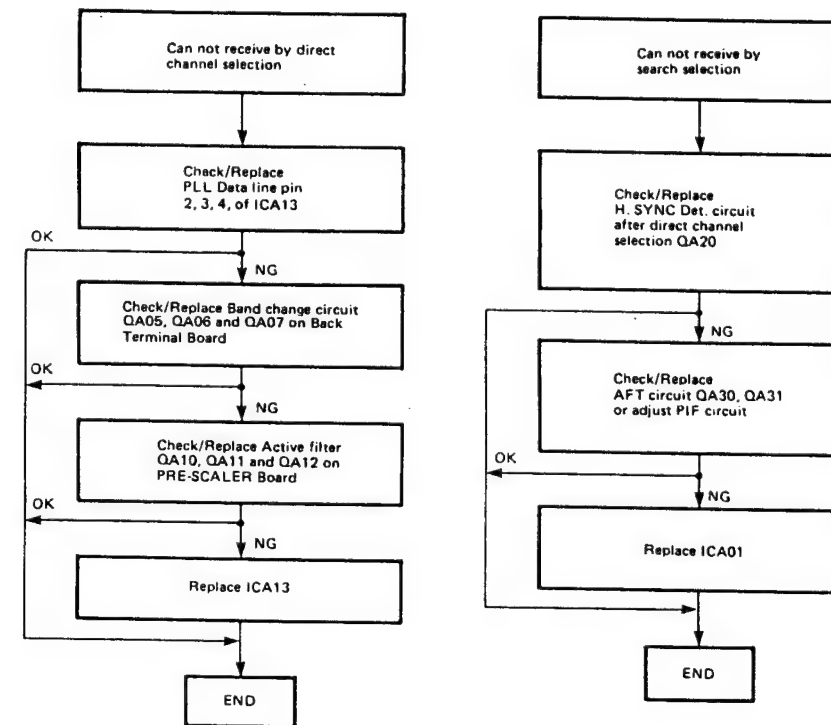




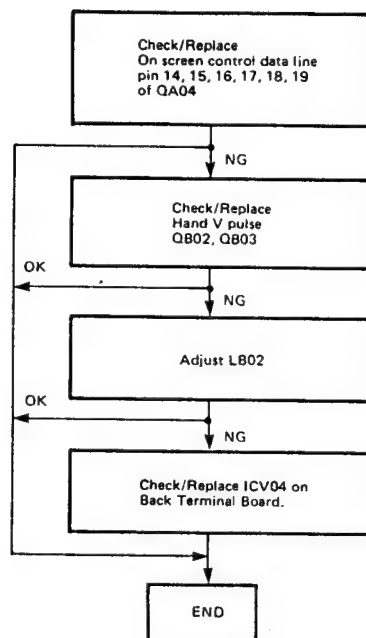
(2) Can not be controled by any RMT key.



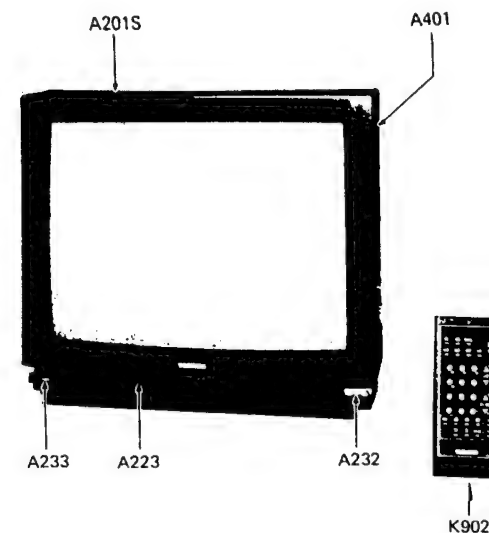
(3) Multifunction of tuning



(4) No on screen display



## CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201S	23417668	Front Cover
A204	23848274	Damper (P-2)
A208	70368125	Push Catch
A216	23832224	Bottom Cover
A217	23805524	Stand
A219	23848016	Holder
A220	23846243	Piece, Shaft(A)
A221	23846244	Piece, Shaft(B)
A222	23999433	Door, Proper(A)
A223	23999434	Door, Proper(B)
A224	23838593	Ornament (Door)
A232	23874041	Knob, POWER
A233	23874042	Knob, VIDEO
A234	23848015	Holder, Knob
A236	70393022	Nut
A401	23999065	Back Cover

Location No.	Part No.	Description
A402	23999432	Back Cover, Proper
A411	23995541	Label, Model Number (On B/C)
A412	23415626	SP Box, Right
A414	23431492	Ornament (SP Right)
A415	23415625	SP Box, Left
A417	23431491	Ornament (SP Left)
A474	23035010	Screw, PBI-4X16
A475	23035010	Screw, PBI-4X16
A701	23924082	Carton
A702	23934691	Packing, Bottom
A703	23934690	Packing, Top
A710	23995539	Label, Model Number
B140	23712306	Screw, PPJX.5X6SZN
K902	23120711	Remote Hand Unit, CT9178

## CHASSIS REPLACEMENT PARTS LIST

**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

**CAUTION:** The international hazard symbols in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

**NOTICE:** The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

### Model 258S7G

#### ABBREVIATIONS:

Capacitors . . . . . CD: Ceramic Disk, PF: Plastic Film, EL: Electrolytic

Resistors . . . . . CF: Carbon Film, CC: Carbon Composition, OMF: Oxide Metal Film, VR: Variable Resistor.

MF: Metal Film, FR: Fusible Resistor.

(All CD and PF capacitors are  $\pm 5\%$ , 50V and all resistors,  $\pm 5\%$ , 1/6W unless otherwise noted.)

Location No.	Part No.	Description
<b>CAPACITORS</b>		
C101	24212102	CD, 1000pF, $\pm 10\%$
C102	24636229	EL, 2.2 $\mu$ F, 50V
C103	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C104	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C105	24636229	EL, 2.2 $\mu$ F, 50V
C106	24206478	EL, 0.47 $\mu$ F, 50V
C107	24633330	EL, 33 $\mu$ F, 16V
C108	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C109	24794331	EL, 330 $\mu$ F, 16V
C110	24203101	EL, 100 $\mu$ F, 16V
C112	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C113	24436101	CD, 100pF
C115	24212102	CD, 1000pF, $\pm 10\%$
C121	24206478	EL, 0.47 $\mu$ F, 50V
C122	24436100	CD, 10pF, $\pm 0.25$ pF
C130	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C131	24797470	EL, 47 $\mu$ F, 50V
C132	24206010	EL, 1 $\mu$ F, 50V
C162	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C163	24212102	CD, 1000pF, $\pm 10\%$
C164	24212102	CD, 1000pF, $\pm 10\%$
C165	24356201	CD, 200pF
C167	24212102	CD, 1000pF, $\pm 10\%$
C168	24212102	CD, 1000pF, $\pm 10\%$
C171	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C201	24436220	CD, 22pF
C202	24436220	CD, 22pF
C203	24436820	CD, 82pF
C204	24636010	EL, 1 $\mu$ F, 50V
C207	24636010	EL, 1 $\mu$ F, 50V
C210	24436101	CD, 100pF
C211	24797470	EL, 47 $\mu$ F, 50V
C212	24212101	CD, 100pF, $\pm 10\%$
C213	24636100	EL, 10 $\mu$ F, 50V
C219	24633100	EL, 10 $\mu$ F, 16V
C230	24636100	EL, 10 $\mu$ F, 50V
C240	24636479	EL, 4.7 $\mu$ F, 50V
C242	24636010	EL, 1 $\mu$ F, 50V
C301	24636010	EL, 1 $\mu$ F, 50V
C302	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$

Location No.	Part No.	Description
C303	24212561	CD, 560pF, $\pm 10\%$
C304	24591102	PF, 1000pF
C305	24550153	PF, 0.015 $\mu$ F, 63V
C306	24550224	PF, 0.22 $\mu$ F, 63V
C307	24212101	CD, 100pF, $\pm 10\%$
C309	24617981	EL, 2.2 $\mu$ F, $\pm 10\%$ , 50V
C310	24636478	EL, 0.47 $\mu$ F, 50V
C311	24796222	EL, 2200 $\mu$ F, 35V
C312	24212332	CD, 3300pF, $\pm 10\%$
C313	24796221	EL, 220 $\mu$ F, 35V
C315	24214221	CD, 220pF, $\pm 10\%$ , 500V
C316	24796332	EL, 3300 $\mu$ F, 35V
C317	24617997	EL, 2.2 $\mu$ F, $\pm 10\%$ , 50V
C319	24591223	PF, 0.022 $\mu$ F
C320	24693563	PF, 0.056 $\mu$ F, 100V
C321	24435510	CD, 51pF, 500V
C322	24550563	PF, 0.056 $\mu$ F, 63V
C327	24693104	PF, 0.1 $\mu$ F, 100V
C360	24095782	PF, 0.47 $\mu$ F, 400V
C361	24212561	CD, 560pF, $\pm 10\%$
C362	24593303	PF, 0.03 $\mu$ F
C363	24095948	PF, 0.36 $\mu$ F, 200V
C364	24212471	CD, 470pF, $\pm 10\%$
C365	24796221	EL, 220 $\mu$ F, 35V
C366	24593472	PF, 4700pF
C367	24550223	PF, 0.022 $\mu$ F, 63V
C368	24550104	PF, 0.1 $\mu$ F, 63V
C369	24550123	PF, 0.012 $\mu$ F, 63V
C371	24591682	PF, 6800pF
C401	24593822	PF, 8200pF
C402	24636478	EL, 0.47 $\mu$ F, 50V
C403	24598562	PF, 5600pF
C405	24598302	PF, 3000pF
C406	24636229	EL, 2.2 $\mu$ F, 50V
C407	24636229	EL, 2.2 $\mu$ F, 50V
C408	24635100	EL, 10 $\mu$ F, 35V
C409	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C410	24212152	CD, 1500pF, $\pm 10\%$
C412	24474102	CD, 1000pF, $\pm 10\%$
C416	24214271	CD, 270pF, $\pm 10\%$ , 500V
C417	24214332	CD, 3300pF, $\pm 10\%$ , 500V

Location No.	Part No.	Description
C418	24757101	EL, 100 $\mu$ F, 100V
C430	24591182	PF, 1800pF
C431	24591182	PF, 1800pF
C440	24095888	PF, 0.01 $\mu$ F, $\pm 3\%$ , 1600V
C441	24214221	CD, 220pF, $\pm 10\%$ , 500V
C443	24214221	CD, 220pF, $\pm 10\%$ , 500V
C445	24095903	PF, 0.056 $\mu$ F, $\pm 10\%$ , 250V
C446	24829363	PF, 0.036 $\mu$ F, 400V
C447	24644479	EL, 4.7 $\mu$ F, 250V
C448	24795102	EL, 1000 $\mu$ F, 25V
C449	24794471	EL, 470 $\mu$ F, 16V
C451	24640962	EL, 33 $\mu$ F, $\pm 20\%$ , 200V
C463	24212222	CD, 2200pF, $\pm 10\%$
C464	24092037	CD, 2700pF, $\pm 10\%$ , 2kV
C465	24095946	PF, 0.43 $\mu$ F, 200V
C501	24436150	CD, 15pF
C502	24436100	CD, 10pF, $\pm 0.25$ pF
C504	24636010	EL, 1 $\mu$ F, 50V
C506	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C507	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C509	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C510	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C511	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C513	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C514	24636478	EL, 0.47 $\mu$ F, 50V
C515	24436270	CD, 27pF
C516	24353330	CD, 33pF
C517	24353680	CD, 68pF
C518	24636479	EL, 4.7 $\mu$ F, 50V
C519	24591223	PF, 0.022 $\mu$ F
C520	24591223	PF, 0.022 $\mu$ F
C523	24550473	PF, 0.047 $\mu$ F, 63V
C524	24436270	CD, 27pF
C527	24636100	EL, 10 $\mu$ F, 50V
C528	24356121	CD, 120pF
C530	24356121	CD, 120pF
C531	24212331	CD, 330pF, $\pm 10\%$
C532	24212471	CD, 470pF, $\pm 10\%$
C533	24212471	CD, 470pF, $\pm 10\%$
C536	24436270	CD, 27pF
C542	24212221	CD, 220pF, $\pm 10\%$
C543	24212221	CD, 220pF, $\pm 10\%$
C544	24212221	CD, 220pF, $\pm 10\%$
C601	24436470	CD, 47pF
C602	24436470	CD, 47pF
C603	24550224	PF, 0.22 $\mu$ F, 63V
C604	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C605	24204330	EL, 33 $\mu$ F, 25V
C606	24436270	CD, 27pF
C607	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C609	24598881	PF, 680pF
C611	24436470	CD, 47pF
C612	24436470	CD, 47pF
C613	24591682	PF, 6800pF
C614	24538563	PF, 0.056 $\mu$ F
C616	24636479	EL, 4.7 $\mu$ F, 50V
C617	24636229	EL, 2.2 $\mu$ F, 50V
C618	24636479	EL, 4.7 $\mu$ F, 50V
C619	24636479	EL, 4.7 $\mu$ F, 50V
C620	24794470	EL, 47 $\mu$ F, 16V
C621	24550104	PF, 0.1 $\mu$ F, 63V
C622	24538563	PF, 0.056 $\mu$ F
C623	24591682	PF, 6800pF
C624	24794470	EL, 47 $\mu$ F, 16V

Location No.	Part No.	Description
C625	24591222	PF, 2200pF
C626	24591222	PF, 2200pF
C630	24591152	PF, 1500pF
C631	24794101	EL, 100 $\mu$ F, 16V
C632	24591473	PF, 0.047 $\mu$ F
C633	24591152	PF, 1500pF
C634	24794101	EL, 100 $\mu$ F, 16V
C635	24591473	PF, 0.047 $\mu$ F
C636	24636479	EL, 4.7 $\mu$ F, 50V
C637	24636479	EL, 4.7 $\mu$ F, 50V
C638	24795102	EL, 1000 $\mu$ F, 25V
C640	24550104	PF, 0.1 $\mu$ F, 63V
C641	24550104	PF, 0.1 $\mu$ F, 63V
C643	24797220	EL, 22 $\mu$ F, 50V
C644	24550104	PF, 0.1 $\mu$ F, 63V
C646	24538104	PF, 0.1 $\mu$ F
C661	24795101	EL, 100 $\mu$ F, 25V
C662	24795101	EL, 100 $\mu$ F, 25V
C663	24795101	EL, 100 $\mu$ F, 25V
C664	24795101	EL, 100 $\mu$ F, 25V
C667	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C670	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C671	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C672	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C673	24232103	CD, 0.01 $\mu$ F, $+80\%$ , $-20\%$
C680	24212681	CD, 680pF, $\pm 10\%$
C681	24214471	CD, 470pF, $\pm 10\%$ , 500V
C685	24636229	EL, 2.2 $\mu$ F, 50V
C801	24098999	PF, 0.1 $\mu$ F, $\pm 20\%$ , AC250V
C802	24098999	PF, 0.1 $\mu$ F, $\pm 20\%$ , AC250V
C803	24094654	CD, 470pF, $\pm 20\%$ , AC400V
C804	24094654	CD, 470pF, $\pm 20\%$ , AC400V
C805	24086883	EL, 330 $\mu$ F, $\pm 20\%$ , 400V
C806	24550474	PF, 0.47 $\mu$ F, 63V
C807	24094653	CD, 220pF, $\pm 20\%$ , AC400V
C809	24095931	PF, 2200pF, 1600V
C811	24550474	PF, 0.47 $\mu$ F, 63V
C812	24756010	EL, 1 $\mu$ F, 50V
C813	24598242	PF, 2400pF
C814	24212102	CD, 1000pF, $\pm 10\%$
C815	24756479	EL, 4.7 $\mu$ F, 50V
C816	24086945	EL, 330 $\mu$ F, $\pm 20\%$ , 200V
C819	24214331	CD, 330pF, $\pm 10\%$ , 500V
C820	24796101	EL, 100 $\mu$ F, 35V
C821	24630960	EL, 47 $\mu$ F, $\pm 20\%$ , 25V
C822	24442181	CD, 180pF, $\pm 10\%$ , 2kV
C825	24593303	PF, 0.03 $\mu$ F
C826	24756470	EL, 47 $\mu$ F, 50V
C827	24094653	CD, 220pF, $\pm 20\%$ , AC400V
C828	24094653	CD, 220pF, $\pm 20\%$ , AC400V
C831	24094906	CD, 4700pF, $+80\%$ , $-20\%$ , AC250V
C832	24094906	CD, 4700pF, $+80\%$ , $-20\%$ , AC250V
C833	24094906	CD, 4700pF, $+80\%$ , $-20\%$ , AC250V
C834	24094906	CD, 4700pF, $+80\%$ , $-20\%$ , AC250V
C836	24094655	CD, 1000pF, $\pm 20\%$ , AC400V
C838	24795331	EL, 330 $\mu$ F, 25V
C840	24633470	EL, 47 $\mu$ F, 16V
C841	24214181	CD, 180pF, $\pm 10\%$ , 500V
C842	24796222	EL, 2200 $\mu$ F, 35V
C843	24796222	EL, 2200 $\mu$ F, 35V

Location No.	Part No.	Description
C844	24204470	EL, 47 $\mu$ F, 25V
C845	24633100	EL, 10 $\mu$ F, 16V
C846	24798470	EL, 47 $\mu$ F, 100V
C847	24636100	EL, 10 $\mu$ F, 50V
C849	24796222	EL, 2200 $\mu$ F, 35V
C861	24820683	PF, 0.068 $\mu$ F, 630V
C862	24442331	CD, 330pF, $\pm 10\%$ , 2kV
C863	24550104	PF, 0.1 $\mu$ F, 63V
C866	24636100	EL, 10 $\mu$ F, 50V
C867	24442221	CD, 220pF, $\pm 10\%$ , 2kV
C868	24550393	PF, 0.039 $\mu$ F, 63V
C869	24636100	EL, 10 $\mu$ F, 50V
C870	24442101	CD, 100pF, $\pm 10\%$ , 2kV
C871	24212102	CD, 1000pF, $\pm 10\%$
C901	24644010	EL, 1 $\mu$ F, 250V
C902	24095923	PF, 4700pF, 1600V
CA01	24641010	EL, 1 $\mu$ F, 100V
CA02	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CA07	24797330	EL, 33 $\mu$ F, 50V
CA11	24550103	PF, 0.01 $\mu$ F, 63V
CA12	24550104	PF, 0.1 $\mu$ F, 63V
CA14	24636100	EL, 10 $\mu$ F, 50V
CA20	24212681	CD, 680pF, $\pm 10\%$
CA21	24591152	PF, 1500pF
CA22	24636010	EL, 1 $\mu$ F, 50V
CA23	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CA28	24636100	EL, 10 $\mu$ F, 50V
CA33	24550104	PF, 0.1 $\mu$ F, 63V
CA40	24436300	CD, 30pF
CA41	24436300	CD, 30pF
CA42	24212102	CD, 1000pF, $\pm 10\%$
CA43	24436240	CD, 24pF
CA44	24436240	CD, 24pF
CA45	24212102	CD, 1000pF, $\pm 10\%$
CA46	24212102	CD, 1000pF, $\pm 10\%$
CA47	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CA48	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CA81	24633100	EL, 10 $\mu$ F, 16V
CA82	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CA83	24794470	EL, 47 $\mu$ F, 16V
CA84	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CA85	24636100	EL, 10 $\mu$ F, 50V
CA88	24641010	EL, 1 $\mu$ F, 100V
CA91	24633100	EL, 10 $\mu$ F, 16V
CB01	24212102	CD, 1000pF, $\pm 10\%$
CB02	24436101	CD, 100pF
CB03	24212102	CD, 1000pF, $\pm 10\%$
CB10	24436101	CD, 100pF
CB11	24436101	CD, 100pF
CB12	24436101	CD, 100pF
CB13	24436101	CD, 100pF
CB26	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CB27	24633100	EL, 10 $\mu$ F, 16V
CD11	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CD12	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CD15	24355620	CD, 62pF
CD16	24340220	CD, 22pF
CD17	24436201	CD, 200pF
CD18	24353150	CD, 15pF
CE11	24636100	EL, 10 $\mu$ F, 50V
CE12	24085991	EL, 1 $\mu$ F, $\pm 20\%$ , 25V, Non-Polar
CE14	24206478	EL, 0.47 $\mu$ F, 50V
CE15	24203100	EL, 10 $\mu$ F, 16V

Location No.	Part No.	Description
CE16	24550224	PF, 0.22 $\mu$ F, 63V
CE17	24085991	EL, 1 $\mu$ F, $\pm 20\%$ , 25V, Non-Polar
CG01	24203100	EL, 10 $\mu$ F, 16V
CG02	24212102	CD, 1000pF, $\pm 10\%$
CG03	24203101	EL, 100 $\mu$ F, 16V
CG04	24203101	EL, 100 $\mu$ F, 16V
CG05	24203100	EL, 10 $\mu$ F, 16V
CG06	24203101	EL, 100 $\mu$ F, 16V
CG07	24203101	EL, 100 $\mu$ F, 16V
CG09	24538103	PF, 0.01 $\mu$ F
CG10	24550103	PF, 0.01 $\mu$ F, 63V
CG11	24203470	EL, 47 $\mu$ F, 16V
CG12	24203470	EL, 47 $\mu$ F, 16V
CG13	24550474	PF, 0.47 $\mu$ F, 63V
CG15	24206010	EL, 1 $\mu$ F, 50V
CG16	24550224	PF, 0.22 $\mu$ F, 63V
CG17	24550104	PF, 0.1 $\mu$ F, 63V
CG18	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CG19	24203101	EL, 100 $\mu$ F, 16V
CG21	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CG22	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CG23	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CG24	24085991	EL, 1 $\mu$ F, $\pm 20\%$ , 25V, Non-Polar
CG25	24085991	EL, 1 $\mu$ F, $\pm 20\%$ , 25V, Non-Polar
CG26	24436151	CD, 150pF
CH02	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CH04	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CH08	24212102	CD, 1000pF, $\pm 10\%$
CH10	24797220	EL, 22 $\mu$ F, 50V
CH11	24206229	EL, 2.2 $\mu$ F, 50V
CH12	24206010	EL, 1 $\mu$ F, 50V
CH13	24206229	EL, 2.2 $\mu$ F, 50V
CH18	24794331	EL, 330 $\mu$ F, 16V
CH20	24206010	EL, 1 $\mu$ F, 50V
CH21	24206010	EL, 1 $\mu$ F, 50V
CH22	24206010	EL, 1 $\mu$ F, 50V
CH24	24212102	CD, 1000pF, $\pm 10\%$
CH25	24203100	EL, 10 $\mu$ F, 16V
CH26	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CH27	24206339	EL, 3.3 $\mu$ F, 50V
CH61	24206010	EL, 1 $\mu$ F, 50V
CH83	24794331	EL, 330 $\mu$ F, 16V
CH90	24212102	CD, 1000pF, $\pm 10\%$
CH91	24206229	EL, 2.2 $\mu$ F, 50V
CH92	24797220	EL, 22 $\mu$ F, 50V
CH93	24206229	EL, 2.2 $\mu$ F, 50V
CH94	24212102	CD, 1000pF, $\pm 10\%$
CH95	24794331	EL, 330 $\mu$ F, 16V
CK01	24203101	EL, 100 $\mu$ F, 16V
CM01	24357220	CD, 22pF
CM07	24636010	EL, 1 $\mu$ F, 50V
CM09	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CM10	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CM11	24636478	EL, 0.47 $\mu$ F, 50V
CM14	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CM15	24636010	EL, 1 $\mu$ F, 50V
CM17	24636010	EL, 1 $\mu$ F, 50V
CM19	24636010	EL, 1 $\mu$ F, 50V
CM21	24633100	EL, 10 $\mu$ F, 16V
CM23	24633100	EL, 10 $\mu$ F, 16V
CM25	24474102	CD, 1000pF, $\pm 10\%$

Location No.	Part No.	Description
CM26	24222103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CM27	24636010	EL, 1 $\mu$ F, 50V
CM28	24359390	CD, 39pF
CM29	24359680	CD, 68pF
CM31	24474331	CD, 330pF, $\pm 10\%$
CM32	24474102	CD, 1000pF, $\pm 10\%$
CM33	24359390	CD, 39pF
CM34	24359560	CD, 56pF
CM36	24474331	CD, 330pF, $\pm 10\%$
CM38	24633100	EL, 10 $\mu$ F, 16V
CM39	24633100	EL, 10 $\mu$ F, 16V
CM40	24794331	EL, 330 $\mu$ F, 16V
CM41	24474103	CD, 0.01 $\mu$ F, $\pm 30\%$ , 16V
CM43	24474103	CD, 0.01 $\mu$ F, $\pm 30\%$ , 16V
CM44	24474103	CD, 0.01 $\mu$ F, $\pm 30\%$ , 16V
CM45	24633470	EL, 47 $\mu$ F, 16V
CM46	24474151	CD, 150pF, $\pm 10\%$
CM47	24474151	CD, 150pF, $\pm 10\%$
CM48	24474151	CD, 150pF, $\pm 10\%$
CM62	24473470	CD, 47pF
CM63	24473470	CD, 47pF
CM64	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CM65	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CM70	24357820	CD, 82pF
CM71	24212821	CD, 820pF, $\pm 10\%$
CM73	24593122	PF, 1200pF
CV01	24206010	EL, 1 $\mu$ F, 50V
CV02	24550224	PF, 0.22 $\mu$ F, 63V
CV03	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CV13	24550104	PF, 0.1 $\mu$ F, 63V
CV14	24550104	PF, 0.1 $\mu$ F, 63V
CV15	24550104	PF, 0.1 $\mu$ F, 63V
CV16	24636010	EL, 1 $\mu$ F, 50V
CV61	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CV70	24636010	EL, 1 $\mu$ F, 50V
CV71	24636010	EL, 1 $\mu$ F, 50V
CV72	24636010	EL, 1 $\mu$ F, 50V
CV73	24206010	EL, 1 $\mu$ F, 50V
CV74	24206010	EL, 1 $\mu$ F, 50V
CV75	24206010	EL, 1 $\mu$ F, 50V
CV80	24206100	EL, 10 $\mu$ F, 50V
CV81	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CV82	24794102	EL, 1000 $\mu$ F, 16V
CV83	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CV85	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CV86	24636100	EL, 10 $\mu$ F, 50V
CV87	24203101	EL, 100 $\mu$ F, 16V
CV88	24232103	CD, 0.01 $\mu$ F, $\pm 80\%$ , $-20\%$
CV90	24085031	EL, 1 $\mu$ F, $\pm 20\%$ , 25V, Non-Polar
CV91	24085031	EL, 1 $\mu$ F, $\pm 20\%$ , 25V, Non-Polar
<b>RESISTORS</b>		
R101	24366122	CF, 1200 ohm
R105	24366221	CF, 220 ohm
R107	24366824	CF, 820k ohm
R109	24366104	CF, 100k ohm
R111	24366100	CF, 10 ohm
R112	24366102	CF, 1k ohm
R113	24366102	CF, 1k ohm
R114	24366562	CF, 5600 ohm
R120	24366222	CF, 2200 ohm
R121	24366562	CF, 5600 ohm

Location No.	Part No.	Description
R122	24366152	CF, 1500 ohm
R123	24366152	CF, 1500 ohm
R124	24366470	CF, 47k ohm
R125	24366430	CF, 43 ohm
R126	24366561	CF, 560 ohm
R129	24366272	CF, 2700 ohm
R130	24553560	OMF, 56 ohm, 1W
R151	24066953	VR, 5k ohm, 1/10W
R152	24066946	VR, 1M ohm, 1/10W
R161	24366820	CF, 82 ohm
R162	24366102	CF, 1k ohm
R163	24366472	CF, 4700 ohm
R166	24366560	CF, 56 ohm
R167	24366680	CF, 68 ohm
R168	24366271	CF, 270 ohm
R171	24366340	CF, 330k ohm
R172	24366102	CF, 1k ohm
R173	24366101	CF, 100 ohm
R174	24366102	CF, 1k ohm
R201	24366331	CF, 330 ohm
R202	24366102	CF, 1k ohm
R203	24366152	CF, 1500 ohm
R204	24366821	CF, 820 ohm
R207	24366471	CF, 470 ohm
R208	24366824	CF, 820k ohm
R209	24366104	CF, 100k ohm
R210	24366152	CF, 1500 ohm
R212	24366153	CF, 15k ohm
R213	24366562	CF, 5600 ohm
R214	24366822	CF, 8200 ohm
R215	24366224	CF, 220k ohm
R216	24366103	CF, 10k ohm
R217	24366223	CF, 22k ohm
R218	24366101	CF, 100 ohm
R220	24366152	CF, 1500 ohm
R224	24366153	CF, 15k ohm
R225	24366103	CF, 10k ohm
R226	24366332	CF, 3300 ohm
R227	24366102	CF, 1k ohm
R228	24366244	CF, 240k ohm
R229	24366562	CF, 5600 ohm
R234	24366102	CF, 1k ohm
R235	24366332	CF, 3300 ohm
R236	24366332	CF, 3300 ohm
R237	24366562	CF, 5600 ohm
R238	24366103	CF, 10k ohm
R240	24366223	CF, 22k ohm
R241	24366104	CF, 100k ohm
R242	24366684	CF, 680k ohm
R243	24366104	CF, 100k ohm
R245	24366331	CF, 330 ohm
R248	24552151	OMF, 150 ohm, 1/2W
R249	24366331	CF, 330 ohm
R252	24066818	VR, 220 ohm, 1/10W
R253	24066818	VR, 220 ohm, 1/10W
R255	24066825	VR, 4.7k ohm, $\pm 20\%$ , 1/10W
R265	24366121	CF, 120 ohm
R270	24366103	CF, 10k ohm
R271	24366103	CF, 10k ohm
R272	24366102	CF, 1k ohm
R273	24366102	CF, 1k ohm
R301	24366561	CF, 5600 ohm
R302	24366564	CF, 560k ohm
R303	24890225	CF, 2.2M ohm, 1/4W

Location No.	Part No.	Description
R304	24366103	CF, 10k ohm
R306	24366681	CF, 680 ohm
R307	24366563	CF, 56k ohm
R308	24366393	CF, 39k ohm
R309	24366224	CF, 220k ohm
R310	24946825	CC, 8.2M ohm, $\pm 10\%$ , 1/2W
R311	24366224	CF, 220k ohm
R312	24366153	CF, 15k ohm
R315	24366163	CF, 16k ohm
R316	24941125	CC, 1.2M ohm, 1/4W
△ R317	24552102	OMF, 1k ohm, 1/2W
R319	24366182	CF, 1800 ohm
R320	24366102	CF, 1k ohm
R321	24366203	CF, 20k ohm
R323	24323828	OMF, 0.82 ohm, 2W
R324	24366163	CF, 16k ohm
R325	24552122	OMF, 1200 ohm, 1/2W
△ R326	24552122	OMF, 1200 ohm, 1/2W
△ R327	24547439	FR, 4.3 ohm, 1W
△ R328	24553111	OMF, 110 ohm, 1W
△ R329	24323688	OMF, 0.68 ohm, 2W
△ R331	24009948	OMF, 2k ohm, 1W
R333	24366102	CF, 1k ohm
△ R334	24553431	OMF, 430 ohm, 1W
R351	24066823	VR, 220k ohm, $\pm 20\%$ , 1/10W
R352	24066819	VR, 47k ohm, 1/10W
R356	24061583	VR, 1M ohm, 1/8W
R357	24061586	VR, 100k ohm, 1/8W
R358	24061592	VR, 1k ohm, 1/8W
R361	24366131	CF, 130 ohm
R362	24366183	CF, 18k ohm
R363	24366912	CF, 9100 ohm
R364	24366273	CF, 27k ohm
R366	24366752	CF, 7500 ohm
R367	24366153	CF, 15k ohm
R368	24366102	CF, 1k ohm
△ R369	24552752	OMF, 7500 ohm, 1/2W
R370	24366752	CF, 7500 ohm
R371	24941335	CC, 3.3M ohm, 1/4W
R372	24366681	CF, 680 ohm
R374	24366103	CF, 10k ohm
R377	24366473	CF, 47k ohm
R378	24366223	CF, 22k ohm
R379	24366153	CF, 15k ohm
R380	24366103	CF, 10k ohm
R381	24366272	CF, 2700 ohm
R382	24366823	CF, 82k ohm
R383	24941105	CC, 1M ohm, 1/4W
R384	24366154	CF, 150k ohm
R385	24366272	CF, 2700 ohm
△ R386	24322479	OMF, 4.7 ohm, 1W
△ R388	24322159	OMF, 1.5 ohm, 1W
R401	24366471	CF, 470 ohm
R402	24366752	CF, 7500 ohm
R403	24366332	CF, 3300 ohm
R404	24366222	CF, 2200 ohm
R405	24366333	CF, 33k ohm
R406	24366154	CF, 150k ohm
△ R407	24552681	OMF, 680 ohm, 1/2W
R408	24366182	CF, 1800 ohm
△ R409	24552121	OMF, 120 ohm, 1/2W
△ R410	24000947	OMF, 15k ohm, $\pm 2\%$ , 1/2W
R411	24366330	CF, 33 ohm
R412	24941125	CC, 1.2M ohm, 1/4W

Location No.	Part No.	Description
△ R416	24007588	Cement, 6800 ohm, 5W
△ R418	24553242	OMF, 2400 ohm, 1W
R419	24942390	CC, 39 ohm, 1/2W
△ R420	24009951	OMF, 1k ohm, 1W
R430	24366302	CF, 3k ohm
△ R431	24552432	OMF, 4300 ohm, 1/2W
△ R440	24552103	OMF, 10k ohm, 1/2W
△ R441	24552103	OMF, 10k ohm, 1/2W
△ R444	24323828	OMF, 0.82 ohm, 2W
△ R447	24007584	Cement, 10 ohm, 4.5W
△ R448	24557109	FR, 1 ohm, $\pm 10\%$ , 1W
R451	24066824	VR, 10k ohm, $\pm 20\%$ , 1/10W
△ R461	24552181	OMF, 180 ohm, 1/2W
R501	24366821	CF, 820 ohm
R502	24366272	CF, 2700 ohm
R503	24366562	CF, 5600 ohm
R504	24366334	CF, 330k ohm
R506	24366182	CF, 1800 ohm
R509	24366391	CF, 390 ohm
R510	24366471	CF, 470 ohm
R511	24366123	CF, 12k ohm
R512	24366623	CF, 62k ohm
R513	24366103	CF, 10k ohm
R514	24366471	CF, 470 ohm
R515	24366821	CF, 820 ohm
R516	24366221	CF, 220 ohm
R517	24366823	CF, 82k ohm
R518	24366273	CF, 27k ohm
R519	24366273	CF, 27k ohm
R520	24366122	CF, 1200 ohm
R522	24366272	CF, 2700 ohm
R524	24366272	CF, 2700 ohm
R526	24366272	CF, 2700 ohm
R528	24366101	CF, 100 ohm
R530	24366101	CF, 100 ohm
△ R533	24009936	OMF, 100k ohm, 1W
△ R534	24009936	OMF, 100k ohm, 1W
△ R535	24009936	OMF, 100k ohm, 1W
R540	24366151	CF, 150 ohm
R541	24366151	CF, 150 ohm
R542	24366151	CF, 150 ohm
R543	24366221	CF, 220 ohm
R544	24366221	CF, 220 ohm
R545	24366221	CF, 220 ohm
R551	24066826	VR, 1k ohm, $\pm 20\%$ , 1/10W
R557	24066821	VR, 4.7k ohm, $\pm 20\%$ , 1/10W
R558	24066821	VR, 4.7k ohm, $\pm 20\%$ , 1/10W
R559	24066821	VR, 4.7k ohm, $\pm 20\%$ , 1/10W
R561	24366183	CF, 18k ohm
R563	24366183	CF, 18k ohm
△ R591	24009974	OMF, 15k ohm, 2W
△ R592	24009974	OMF, 15k ohm, 2W
△ R593	24009974	OMF, 15k ohm, 2W
△ R594	24552471	OMF, 470 ohm, 1/2W
R602	24366331	CF, 330 ohm
R606	24366182	CF, 1800 ohm
R607	24366102	CF, 1k ohm
R608	24366102	CF, 1k ohm
R609	24366102	CF, 1k ohm
R611	24366104	CF, 100k ohm
R612	24366104	CF, 100k ohm
R613	24366152	CF, 1500 ohm
R614	24366152	CF, 1500 ohm
R615	24366103	CF, 10k ohm

Location No.	Part No.	Description
R616	24366103	CF, 10k ohm
R617	24366101	CF, 100 ohm
R618	24366101	CF, 100 ohm
R619	24366101	CF, 100 ohm
R622	24366103	CF, 10k ohm
R625	24366472	CF, 4700 ohm
R626	24366472	CF, 4700 ohm
R628	24366101	CF, 100 ohm
R630	24366472	CF, 4700 ohm
R631	24366472	CF, 4700 ohm
R632	24366201	CF, 200 ohm
R633	24366201	CF, 200 ohm
△ R634	24321229	OMF, 2.2 ohm, 1/2W
△ R635	24321229	OMF, 2.2 ohm, 1/2W
△ R636	24321229	OMF, 2.2 ohm, 1/2W
△ R637	24321229	OMF, 2.2 ohm, 1/2W
R638	24366271	CF, 270 ohm
R639	24366271	CF, 270 ohm
R640	24366103	CF, 10k ohm
R641	24366473	CF, 47k ohm
R645	24366821	CF, 820 ohm
R646	24366821	CF, 820 ohm
R647	24366124	CF, 120k ohm
△ R661	24552330	OMF, 33 ohm, 1/2W
△ R662	24552221	OMF, 220 ohm, 1/2W
△ R663	24552560	OMF, 56 ohm, 1/2W
R664	24366430	CF, 43 ohm
R665	24366430	CF, 43 ohm
△ R666	24552330	OMF, 33 ohm, 1/2W
△ R667	24552221	OMF, 220 ohm, 1/2W
△ R668	24552560	OMF, 56 ohm, 1/2W
R670	24366183	CF, 18k ohm
R671	24366242	CF, 2400 ohm
R672	24366202	CF, 2k ohm
R673	24366271	CF, 270 ohm
R674	24366271	CF, 270 ohm
R675	24366821	CF, 820 ohm
R676	24366883	CF, 68k ohm
R677	24366153	CF, 15k ohm
R678	24366102	CF, 1k ohm
R680	24366104	CF, 100k ohm
R681	24366273	CF, 27k ohm
R682	24366472	CF, 4700 ohm
R683	24366562	CF, 5600 ohm
R684	24366301	CF, 300 ohm
R685	24366333	CF, 33k ohm
R686	24366103	CF, 10k ohm
R687	24366183	CF, 18k ohm
R688	24366332	CF, 3300 ohm
R692	24366104	CF, 100k ohm
△ R802	24007938	Cement, 180 ohm, 15W
△ R803	24965563	OMF, 56k ohm, 3W
△ R804	24552362	OMF, 3600 ohm, 1/2W
△ R805	24007771	Cement, 10 ohm, 10W
R806	24366361	CF, 360 ohm
R807	24366100	CF, 10 ohm
△ R808	24321478	OMF, 0.47 ohm, 1/2W
R809	24366361	CF, 360 ohm
△ R810	24327164	MF, 160k ohm, $\pm 1\%$ , 1/4W
△ R811	24327184	MF, 180k ohm, $\pm 1\%$ , 1/4W
△ R812	24553202	OMF, 2k ohm, 1W
R813	24366393	CF, 39k ohm
△ R814	24327561	MF, 560 ohm, $\pm 1\%$ , 1/4W
R815	24366622	CF, 6200 ohm

Location No.	Part No.	Description
R816	24366112	CF, 1100 ohm
△ R817	24003987	MF, 1k ohm, $\pm 2\%$ , 1/4W
△ R818	24327202	MF, 2k ohm, $\pm 1\%$ , 1/4W
△ R819	24552470	OMF, 47 ohm, 1/2W
△ R820	24531220	FR, 22 ohm, 1/2W
△ R821	24321399	OMF, 3.9 ohm, 1/2W
R823	24366100	CF, 10 ohm
R824	24366472	CF, 4700 ohm
R825	24366102	CF, 1k ohm
R828	24366822	CF, 8200 ohm
R829	24377154	CF, 150k ohm, 1W
△ R831	24007665	Cement, 5.6 ohm, 20W
△ R833	24321228	OMF, 0.22 ohm, 1/2W
△ R840	24009944	OMF, 240 ohm, 2W
△ R841	24009944	OMF, 240 ohm, 2W
△ R842	24982339	MF, 3.3 ohm, 1/2W
△ R843	24531100	FR, 10 ohm, 1/2W
R844	24366681	CF, 680 ohm
R845	24366102	CF, 1k ohm
R846	24366472	CF, 4700 ohm
△ R847	24383821	OMF, 820 ohm, 2W
R848	24366330	CF, 33 ohm
△ R849	24982109	MF, 1 ohm, 1/2W
R851	24066930	VR, 500 ohm, 1/10W
R860	24942565	CC, 5.6M ohm, 1/2W
△ R861	24383134	OMF, 130k ohm, 2W
△ R863	24383134	OMF, 130k ohm, 2W
△ R864	24381100	OMF, 10 ohm, 1/2W
△ R865	24381101	OMF, 100 ohm, 1/2W
△ R866	24382390	OMF, 39 ohm, 1W
R867	24366681	CF, 680 ohm
R868	24366681	CF, 680 ohm
R869	24366681	CF, 680 ohm
R872	24366471	CF, 470 ohm
△ R873	24000954	FR, 0.68 ohm, $\pm 10\%$ , 2W
R874	24377224	CF, 220k ohm, 1W
△ R890	24000816	PTC Thermistor, Dual
R901	24946152	CC, 1500 ohm, $\pm 10\%$
R902	24946152	CC, 1500 ohm, $\pm 10\%$
R903	24946152	CC, 1500 ohm, $\pm 10\%$
△ R920	24000919	FR, 1 ohm, 2W
△ RA01	24553223	OMF, 22k ohm, 1W
RA03	24366394	CF, 390k ohm
RA04	24366333	CF, 33k ohm
RA06	24366682	CF, 6800 ohm
RA07	24366473	CF, 47k ohm
RA08	24366682	CF, 6800 ohm
RA09	24366473	CF, 47k ohm
RA10	24366562	CF, 5600 ohm
RA12	24366392	CF, 3900 ohm
RA13	24366152	CF, 1500 ohm
RA14	24366361	CF, 360 ohm
RA15	24366203	CF, 20k ohm
RA16	24366273	CF, 27k ohm
RA17	24366101	CF, 100 ohm
RA18	24366125	CF, 1.2M ohm
RA20	24366472	CF, 4700 ohm
RA21	24366562	CF, 5600 ohm
RA22	24366473	CF, 47k ohm
RA23	24366152	CF, 1500 ohm
RA24	24366103	CF, 10k ohm
RA25	24366103	CF, 10k ohm
RA26	24366562	CF, 5600 ohm
RA27	24366105	CF, 1M ohm

Location No.	Part No.	Description
RA30	24366224	CF, 220k ohm
RA31	24366822	CF, 8200 ohm
RA32	24366752	CF, 7500 ohm
RA33	24366103	CF, 10k ohm
RA34	24366103	CF, 10k ohm
RA35	24890103	CF, 10k ohm, 1/4W
RA37	24366103	CF, 10k ohm
RA38	24366272	CF, 2700 ohm
RA41	24366102	CF, 1k ohm
RA45	24366820	CF, 82 ohm
RA48	24366103	CF, 10k ohm
RA49	24366102	CF, 1k ohm
RA59	24366102	CF, 1k ohm
RA60	24366102	CF, 1k ohm
RA61	24366103	CF, 10k ohm
RA62	24366103	CF, 10k ohm
RA63	24366103	CF, 10k ohm
RA64	24366103	CF, 10k ohm
RA65	24366103	CF, 10k ohm
RA66	24366103	CF, 10k ohm
RA67	24366103	CF, 10k ohm
RA68	24366103	CF, 10k ohm
RA69	24366103	CF, 10k ohm
RA70	24366101	CF, 100 ohm
RA72	24366153	CF, 15k ohm
RA73	24366102	CF, 1k ohm
RA75	24366473	CF, 47k ohm
RA82	24366331	CF, 330 ohm
RA86	24366101	CF, 100 ohm
RA87	24366101	CF, 100 ohm
RA88	24366101	CF, 100 ohm
RA90	24366102	CF, 1k ohm
RA91	24366472	CF, 4700 ohm
RA92	24366102	CF, 1k ohm
RA93	24366472	CF, 4700 ohm
RA94	24366103	CF, 10k ohm
RA95	24366103	CF, 10k ohm
RA96	24366103	CF, 10k ohm
RA97	24366102	CF, 1k ohm
RA98	24366103	CF, 10k ohm
RA99	24366103	CF, 10k ohm
RB01	24366103	CF, 10k ohm
RB02	24366302	CF, 3k ohm
RB03	24366333	CF, 33k ohm
RB04	24366103	CF, 10k ohm
RB05	24366103	CF, 10k ohm
RB06	24366302	CF, 3k ohm
RB07	24366103	CF, 10k ohm
RB10	24366102	CF, 1k ohm
RB11	24366102	CF, 1k ohm
RB12	24366102	CF, 1k ohm
RB13	24366331	CF, 330 ohm
RB16	24366102	CF, 1k ohm
RD11	24366102	CF, 1k ohm
RD13	24366153	CF, 15k ohm
RD14	24366332	CF, 3300 ohm
RD15	24366222	CF, 2200 ohm
RE11	24366562	CF, 5600 ohm
RE12	24366392	CF, 3900 ohm
RE21	24366472	CF, 4700 ohm
RE22	24366272	CF, 2700 ohm
RE23	24366472	CF, 4700 ohm
RE24	24366272	CF, 2700 ohm
RE35	24366222	CF, 2200 ohm

Location No.	Part No.	Description
RE36	24366823	CF, 82k ohm
RE37	24366823	CF, 82k ohm
RE38	24366563	CF, 56k ohm
RE39	24366202	CF, 2k ohm
RE40	24366123	CF, 12k ohm
RE41	24366133	CF, 13k ohm
RE42	24366472	CF, 4700 ohm
RE43	24366563	CF, 56k ohm
RG01	24366272	CF, 2700 ohm
RG02	24366103	CF, 10k ohm
RG03	24366392	CF, 3900 ohm
RG06	24366683	CF, 68k ohm
RG07	24366683	CF, 68k ohm
RG08	24366103	CF, 10k ohm
RG09	24366473	CF, 47k ohm
RG11	24366103	CF, 10k ohm
RG12(U902A)	24366333	CF, 33k ohm
RG12(U904)	24366303	CF, 30k ohm
RG13	24366103	CF, 10k ohm
RG14	24366822	CF, 8200 ohm
RG15	24366103	CF, 10k ohm
RG16	24366103	CF, 10k ohm
RG18	24366473	CF, 47k ohm
RG19	24366103	CF, 10k ohm
RG20	24366103	CF, 10k ohm
△ RG21	24552221	OMF, 220 ohm, 1/2W
RG22	24366103	CF, 10k ohm
RG23	24366332	CF, 3300 ohm
RG51	24066952	VR, 10k ohm, 1/10W
RH01	24366820	CF, 82 ohm
RH07	24366101	CF, 100 ohm
RH08	24366103	CF, 10k ohm
RH09	24366102	CF, 1k ohm
RH10	24366473	CF, 47k ohm
RH15	24366562	CF, 5600 ohm
RH18	24366563	CF, 56k ohm
RH20	24366750	CF, 75 ohm
RH21	24366750	CF, 75 ohm
RH23	24366750	CF, 75 ohm
RH24	24366102	CF, 1k ohm
RH25	24366820	CF, 82 ohm
RH26	24366820	CF, 82 ohm
RH30	24366682	CF, 6800 ohm
RH31	24366122	CF, 1200 ohm
RH32	24366272	CF, 2700 ohm
RH34	24366682	CF, 6800 ohm
RH35	24366122	CF, 1200 ohm
RH36	24366272	CF, 2700 ohm
△ RH41	24552391	OMF, 390 ohm, 1/2W
△ RH43	24552221	OMF, 220 ohm, 1/2W
RH45	24366103	CF, 10k ohm
RH46	24366273	CF, 27k ohm
RH52	24066935	VR, 5k ohm, 1/10W, CC
RH53	24066951	VR, 20k ohm, 1/10W
RH61	24366101	CF, 100 ohm
RH62	24366102	CF, 1k ohm
RH65	24366103	CF, 10k ohm
RH66	24366473	CF, 47k ohm
RH70	24366563	CF, 56k ohm
RH90	24366473	CF, 47k ohm
RH91	24366101	CF, 100 ohm
RH92	24366473	CF, 47k ohm
RH93	24366101	CF, 100 ohm
RH94	24366103	CF, 10k ohm

Location No.	Part No.	Description
RH95	24366562	CF, 5600 ohm
RH96	24366820	CF, 82 ohm
△ RH97	24552391	OMF, 390 ohm, 1/2W
RH98	24366102	CF, 1k ohm
RK01	24366223	CF, 22k ohm
△ RK02	24552470	OMF, 47 ohm, 1/2W
RM01	24366101	CF, 100 ohm
RM02	24366271	CF, 270 ohm
RM03	24366104	CF, 100k ohm
RM04	24366102	CF, 1k ohm
RM07	24366153	CF, 15k ohm
RM08	24890103	CF, 10k ohm, 1/4W
RM11	24366332	CF, 3300 ohm
RM12	24366151	CF, 150 ohm
RM13	24366332	CF, 3300 ohm
RM14	24366151	CF, 150 ohm
RM15	24366332	CF, 3300 ohm
RM16	24366151	CF, 150 ohm
RM18	24366122	CF, 1200 ohm
RM20	24890104	CF, 100k ohm, 1/4W
RM21	24366103	CF, 10k ohm
RM22	24366152	CF, 1500 ohm
RM23	24366152	CF, 1500 ohm
RM24	24366332	CF, 3300 ohm
RM25	24366681	CF, 680 ohm
RM26	24366471	CF, 470 ohm
RM27	24366152	CF, 1500 ohm
RM28	24366152	CF, 1500 ohm
RM29	24366332	CF, 3300 ohm
RM30	24366331	CF, 330 ohm
RM32	24546569	FR, 5.6 ohm, 1/2W
RM34	24366681	CF, 680 ohm
RM35	24366272	CF, 2700 ohm
RM36	24366563	CF, 56k ohm
RM40	24366392	CF, 3900 ohm
RM65	24366223	CF, 22k ohm
RM66	24366103	CF, 10k ohm
RM67	24366682	CF, 6800 ohm
RM68	24366822	CF, 8200 ohm
RM70	24366471	CF, 470 ohm
RM71	24366271	CF, 270 ohm
RM72	24366471	CF, 470 ohm
RM73	24366393	CF, 39k ohm
RM74	24366471	CF, 470 ohm
RM75	24366222	CF, 2200 ohm
RM76	24366103	CF, 10k ohm
RM77	24890222	CF, 2200 ohm, 1/4W
RM80	24366103	CF, 10k ohm
RM81	24366332	CF, 3300 ohm
RM82	24366472	CF, 4700 ohm
RM83	24366562	CF, 5600 ohm
RM84	24366562	CF, 5600 ohm
RR02	24376913	CF, 91k ohm, 1/2W
RR03	24376913	CF, 91k ohm, 1/2W
RR04	24366223	CF, 22k ohm
RR05	24366103	CF, 10k ohm
RR06	24366222	CF, 2200 ohm
RR07	24366562	CF, 5600 ohm
RR25	24366201	CF, 200 ohm
RV01	24366821	CF, 820 ohm
RV02	24366102	CF, 1k ohm
RV03	24366101	CF, 100 ohm
RV04	24366821	CF, 820 ohm
RV06	24366101	CF, 100 ohm

Location No.	Part No.	Description
RV07	24366101	CF, 100 ohm
RV08	24366102	CF, 1k ohm
RV10	24366221	CF, 220 ohm
RV11	24366221	CF, 220 ohm
RV12	24366221	CF, 220 ohm
RV13	24366101	CF, 100 ohm
RV14	24366393	CF, 39k ohm
RV15	24366393	CF, 39k ohm
RV16	24366103	CF, 10k ohm
RV17	24366102	CF, 1k ohm
RV18	24366222	CF, 2200 ohm
RV19	24366103	CF, 10k ohm
RV20	24366103	CF, 10k ohm
△ RV21	24552471	OMF, 470 ohm, 1/2W
RV22	24366121	CF, 120 ohm
RV23	24366121	CF, 120 ohm
RV24	24366121	CF, 120 ohm
RV25	24366821	CF, 820 ohm
RV26	24366101	CF, 100 ohm
RV27	24366473	CF, 47k ohm
RV30	24366103	CF, 10k ohm
RV31	24366472	CF, 4700 ohm
RV32	24366272	CF, 2700 ohm
RV33	24366333	CF, 33k ohm
RV34	24366333	CF, 33k ohm
RV36	24366103	CF, 10k ohm
RV37	24366183	CF, 18k ohm
RV39	24366222	CF, 2200 ohm
RV40	24366102	CF, 1k ohm
RV42	24366332	CF, 3300 ohm
RV43	24366472	CF, 4700 ohm
RV44	24366103	CF, 10k ohm
RV45	24366472	CF, 4700 ohm
RV46	24366222	CF, 2200 ohm
RV48	24366103	CF, 10k ohm
RV49	24366102	CF, 1k ohm
RV61	24366332	CF, 3300 ohm
RV62	24366272	CF, 2700 ohm
RV63	24366824	CF, 820k ohm
RV64	24366682	CF, 6800 ohm
RV65	24366101	CF, 100 ohm
RV66	24366123	CF, 12k ohm
RV67	24366123	CF, 12k ohm
RV68	24366101	CF, 100 ohm
RV69	24366272	CF, 2700 ohm
RV70	24366102	CF, 1k ohm
RV71	24366332	CF, 3300 ohm
RV72	24366824	CF, 820k ohm
RV73	24366102	CF, 1k ohm
RV74	24366102	CF, 1k ohm
RV75	24366102	CF, 1k ohm
RV76	24366392	CF, 3900 ohm
RV77	24366392	CF, 3900 ohm
RV78	24366392	CF, 3900 ohm
RV79	24366824	CF, 820k ohm
△ RV80	24552181	OMF, 180 ohm, 1/2W
△ RV81	24552181	OMF, 180 ohm, 1/2W
△ RV82	24552271	OMF, 270 ohm, 1/2W
RV83	24366105	CF, 1M ohm
RV84	24366105	CF, 1M ohm
RV85	24366105	CF, 1M ohm
RV86	24366103	CF, 10k ohm
RV87	24366393	CF, 39k ohm
RV90	24366101	CF, 100 ohm



Location No.	Part No.	Description
RV91	24366101	CF, 100 ohm
RV96	24366332	CF, 3300 ohm
RV97	24366332	CF, 3300 ohm
RV98	24366103	CF, 10k ohm
RZ01	24000766	Resistor Block, 10k ohmx4, 1/8W
RZ02	24000765	Resistor Block, 10k ohmx5, 1/8W
<b>COILS &amp; TRANSFORMERS</b>		
L101	23237982	Coil, Peaking, TRF4270AC
L102	23262856	Coil, PIF, TRF1452
L103	23262783	Coil, IF Coil, TRF1105
L105	23237991	Coil, Peaking, TRF4479AC
L107	23262961	Coil, PIF Trap, TRF1411
L109	23237988	Coil, Peaking, TRF4829AC
L110	23237977	Coil, Peaking, TRF4680AC
L111	23201003	Coil, Choke, TRF9202A
L130	23237977	Coil, Peaking, TRF4680AC
L162	23261986	Coil, RF Choke, TRF9220
L171	23262813	Coil, IF Coil, TRF1077
L201	23237985	Coil, Peaking, TRF4150AC
L311	23261974	Coil (Ferrite Bead), HC5-035
L362	23211924	Coil, Choke, AT4043/60
L363	23211923	Coil, Choke, AT4043/100
L406	23261974	Coil (Ferrite Bead), HC5-035
L407	23238934	Coil, Peaking, TRF4109AC
L411	23222673	Coil, Linearity, TLN2056
Δ L462	23227445	Deflection Yoke, AT6010/OO
L501	23237982	Coil, Peaking, TRF4270AC
L502	23237985	Coil, Peaking, TRF4150AC
L503	23237973	Coil, Peaking, TRF4151AC
L551	23250972	Coil, 1H-Delay Matching, TRF5418
L552	23250943	Coil, IF Coil, TRF5426
L630	23237977	Coil, Peaking, TRF4680AC
L632	23237986	Coil, Peaking, TRF4120AC
L633	23237986	Coil, Peaking, TRF4120AC
L634	23232927	Coil, Variable, TRF3092
L801	23221050	Coil, RF Choke, TLN1015
L802	23261975	Coil, Choke, TRF9229
L803	23222694	Coil, Width, TLN2026
L806	23103981	Coil, RF Choke, RH0630025
L807	23261975	Coil, Choke, TRF9229
L808	23221060	Coil, RF Choke, TLN1015E
L841	23103940	Coil (Ferrite Bead), TEM2001
L842	23222694	Coil, Width, TLN2026
L861	23103940	Coil (Ferrite Bead), TEM2001
L862	23103940	Coil (Ferrite Bead), TEM2001
Δ L901	23200749	Coil, Degaussing, TSB2247
LA05	23237987	Coil, Peaking, TRF4100AC
LA11	23238934	Coil, Peaking, TRF4109AC
LB01	23238934	Coil, Peaking, TRF4109AC
LB02	23262776	Coil, IF Coil, TRF1114
LD05	23232946	Coil, Variable, TRF3073
LG01	23262808	Coil, IF Coil, TRF1082
LM51	23262797	Coil, IF Coil, TRF1093
LM52	23262798	Coil, IF Coil, TRF1092
LM53	23262798	Coil, IF Coil, TRF1092
LM54	23262798	Coil, IF Coil, TRF1092
LM56	23237894	Coil, Peaking, TRF4472AE
LM57	23237988	Coil, Peaking, TRF4829AC
LM58	23237988	Coil, Peaking, TRF4829AC

Location No.	Part No.	Description
T401	23224978	Transformer, Horiz. Drive, TLN1046
Δ T461	23236088	Transformer, Flyback, TRF4069AD
T801	23211962	Line Filter, TRF3117
Δ T802	23213624	Transformer, Converter, TPW3092
Δ T803	23213582	Transformer, Converter, TPW3105
T804	23211930	Line Filter, TRF3126A
<b>SEMICONDUCTORS</b>		
IC101	23318196	IC, T51365SP
IC303	23119142	IC, AN5521
IC361	23318052	IC, TDA8145
IC408	23318218	IC, μPC7812H
IC501	B0357050	IC, TA7699AP
IC601	B0356190	IC, TA7630P
IC606	23318195	IC, AN7171NK
ICA01	23318202	IC, M50747-254SP
ICA02	23119107	IC, M58630P
ICA03	23119182	IC, PD6336C
ICA04	23119100	IC, M50450-022P
ICA13	B0272490	IC, TD6350P
ICD03	B0325290	IC, TA7337P
ICG01	23119092	IC, TDA6600
ICG02	B0349250	IC, TA75393S
ICG03	B0470532	IC, TC4053BP
ICH01	B0470532	IC, TC4053BP
ICH02	B0470532	IC, TC4053BP
ICM01	23119543	IC, T51397AP
ICV01	B0379280	IC, TA8628N
ICV02	23318194	IC, T1417CA
ICV04	23119139	IC, AN5862K
Q161	A6708871	Transistor, 2SC388ATM
Q163	A6708871	Transistor, 2SC388ATM
Q201	23114689	Transistor, BC547A
Q203	23114689	Transistor, BC547A
Q205	23114689	Transistor, BC547A
Q207	23114689	Transistor, BC547A
Q208	23114689	Transistor, BC547A
Q210	23114691	Transistor, BC557A
Q211	23114689	Transistor, BC547A
Q302	23114691	Transistor, BC557A
Q303B	23035308	Screw, BTB3X8S2N
Q363	23114689	Transistor, BC547A
Q402	A678971D	Transistor, 2SC1569 FA-5
Δ Q404	A6868953	Transistor, 2SD1432
Q505	23114693	Transistor, BF871
Q507	23114693	Transistor, BF871
Q509	23114693	Transistor, BF871
Q511	A6547250	Transistor, 2SA1320
Q512	A6547250	Transistor, 2SA1320
Q513	A6547250	Transistor, 2SA1320
Q603	23114689	Transistor, BC547A
Q604	23114689	Transistor, BC547A
Q605	23114689	Transistor, BC547A
Q670	A6708871	Transistor, 2SC388ATM
Q671	23114689	Transistor, BC547A
Q672	23114689	Transistor, BC547A
Q680	23114689	Transistor, BC547A
Q681	23114689	Transistor, BC547A
Q682	23114691	Transistor, BC557A
Q683	23114691	Transistor, BC557A

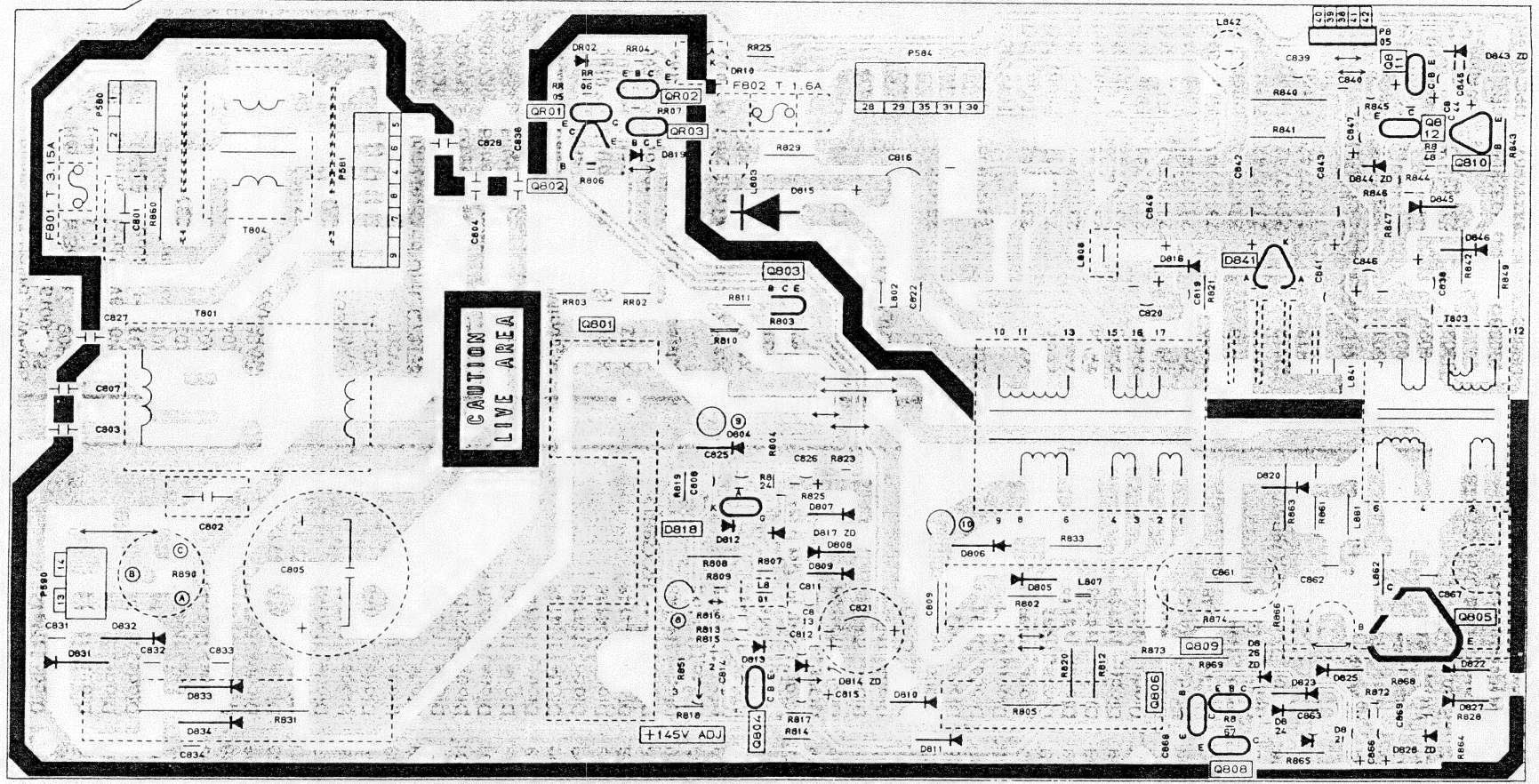
Location No.	Part No.	Description
Δ Q801	A6865553	Transistor, 2SD1279
Q802	A6533730	Transistor, 2SA1012-Y
Q803	A6319280	Transistor, 2SC1959-O
Q804	23114546	Transistor, BC557B
Q805	23314018	Transistor, 2SC3678
Q808	23114632	Transistor, BC547B
Q809	23114546	Transistor, BC557B
Q810	A6842185	Transistor, 2SD553-Y
Q811	23114546	Transistor, BC557B
Q812	23314225	Transistor, BC556A
QA05	23114689	Transistor, BC547A
QA06	23114691	Transistor, BC557A
QA07	23114691	Transistor, BC557A
QA08	23114691	Transistor, BC557A
QA11	A6041876	Transistor, 2SK117-GR FA-2
QA12	23114689	Transistor, BC547A
QA14	23114689	Transistor, BC547A
QA15	23114691	Transistor, BC557A
QA20	23114689	Transistor, BC547A
QA21	23114632	Transistor, BC547B
QA22	23114691	Transistor, BC557A
QA30	23114691	Transistor, BC557A
QA31	23114689	Transistor, BC547A
QB05	23114689	Transistor, BC547A
QB06	23114689	Transistor, BC547A
QE10	23114689	Transistor, BC547A
QE11	23114691	Transistor, BC557A
QE21	23114691	Transistor, BC557A
QE22	23114691	Transistor, BC557A
QG05	23114632	Transistor, BC547B
QG06	23114691	Transistor, BC557A
QG07	23114689	Transistor, BC547A
QH03	23114691	Transistor, BC557A
QH04	23114691	Transistor, BC557A
QH05	23114691	Transistor, BC557A
QH06	23114689	Transistor, BC547A
QH08	23114689	Transistor, BC547A
QM02	23114691	Transistor, BC557A
QM08	23114689	Transistor, BC547A
QM12	23114691	Transistor, BC557A
QM13	23114689	Transistor, BC547A
QR01	23114632	Transistor, BC547B
QR02	23114632	Transistor, BC547B
QV05	23114691	Transistor, BC557A
QV06	23114691	Transistor, BC557A
QV07	23114689	Transistor, BC547A
QV08	23114689	Transistor, BC547A
QV10	23114689	Transistor, BC547A
QV11	23114691	Transistor, BC557A
QV12	23114691	Transistor, BC557A
QV15	23114689	Transistor, BC547A
QV17	23114691	Transistor, BC557A
D202	23115599	Diode, 1N4148
D203	23115599	Diode, 1N4148
D204	23115599	Diode, 1N4148
D205	23115599	Diode, 1N4148
D206	23115599	Diode, 1N4148
D212	23115599	Diode, 1N4148
D213	A7150041	Diode, 1SS104
D214	23115599	Diode, 1N4148
D241	23115599	Diode, 1N4148
D242	23115599	Diode, 1N4148
D243	A7150041	Diode, 1SS104
D244	23115599	Diode, 1N4148

Location No.	Part No.	Description
D245	23115599	Diode, 1N4148
D301	23115599	Diode, 1N4148
D302	A7568250	Diode, 1S1834
D305	23118977	Diode, ERC01-02FL
D306	23118102	Diode, Zener, ZPY-6.8
D309	23115598	Diode, 1N4003
D315	A7110160	Diode, Zener, 05Z7.5Y
D361	A7110611	Diode, Zener, 05Z18Y
D362	23115599	Diode, 1N4148
D364	A7110262	Diode, Zener, 05Z9.1Y
D366	A7109474	Diode, Zener, 05Z4.7Y
D367	23115599	Diode, 1N4148
D368	A7110725	Diode, Zener, 05Z30Y
D371	23115526	Diode, Zener, BZX79B5V1
D406	23118479	Diode, BYD33J
D408	23118994	Diode, BYW95C
D415	23115599	Diode, 1N4148
D416	A7110312	Diode, Zener, 05Z10Y
D440	23118995	Diode, BY228
D441	23118994	Diode, BYW95C
D561	23115599	Diode, 1N4148
D591	23115599	Diode, 1N4148
D592	23115599	Diode, 1N4148
D593	23115599	Diode, 1N4148
D682	23115599	Diode, 1N4148
D804	A7978855	Diode, S5295J
D805	A7568300	Diode, 1S1835
D806	23115690	Diode, GU3C
D807	A7568300	Diode, 1S1835
D808	A7568300	Diode, 1S1835
D809	A7568300	Diode, 1S1835
D810	A7568300	Diode, 1S1835
D811	A7978850	Diode, S5295G
D812	23115599	Diode, 1N4148
D813	23115599	Diode, 1N4148
D814	23118523	Diode, Zener, RD7.5ES-B2
D815	23118451	Diode, RU4A
D816	23118479	Diode, BYD33J
Δ D817	23118539	Diode, Zener, RD6.2ES-B1
D818	A7800720	Diode, SFOR1B41
D819	23115599	Diode, 1N4148
D820	23118736	Diode, BYV96E
D821	23115599	Diode, 1N4148
D822	23118479	Diode, BYD33J
D823	23118479	Diode, BYD33J
D824	23118479	Diode, BYD33J
D825	23118479	Diode, BYD33J
D826	A7116315	Diode, Zener, 04AZ5.1Y
D827	23118479	Diode, BYD33J
D828	A7116615	Diode, Zener, 04AZ6.8Y
D831	A7568410	Diode, TVR-4J
D832	A7568410	Diode, TVR-4J
D833	A7568410	Diode, TVR-4J
D834	A7568410	Diode, TVR-4J
D841	A7680725	Diode, 10DL2C41
D843	23118532	Diode, Zener, RD5.1ES-B2
D844	23118611	Diode, Zener, RD30ES-B3
D845	23118479	Diode, BYD33J
D846	23118479	Diode, BYD33J
D847	23118479	Diode, BYD33J
DA03	23115599	Diode, 1N4148
DA04	23115599	Diode, 1N4148
DA05	23115878	Diode, Zener, μPC574JC
DA06	23115599	Diode, 1N4148



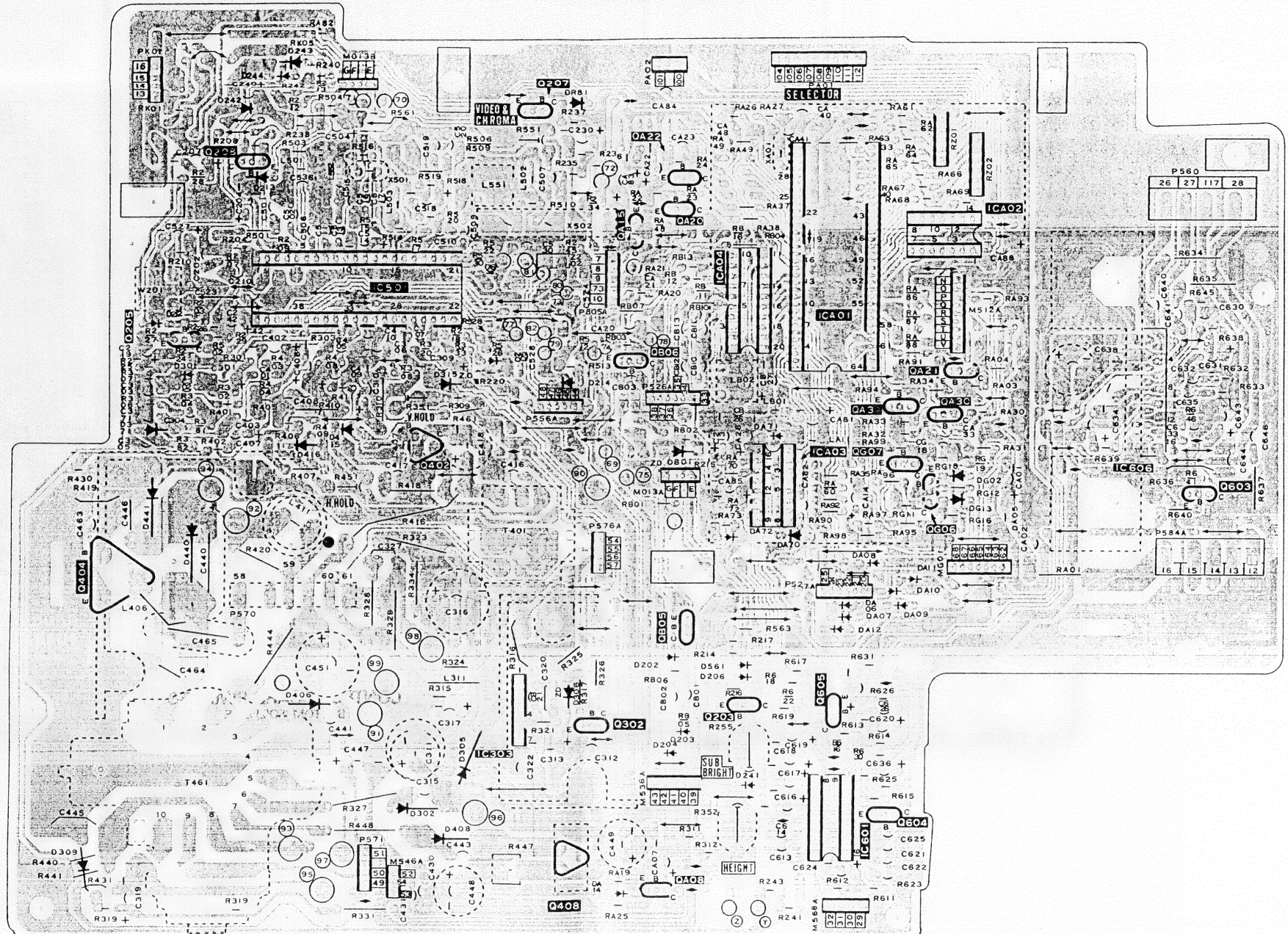


**POWER BOARD PW6100-1**  
**BOTTOM (FOIL) SIDE**



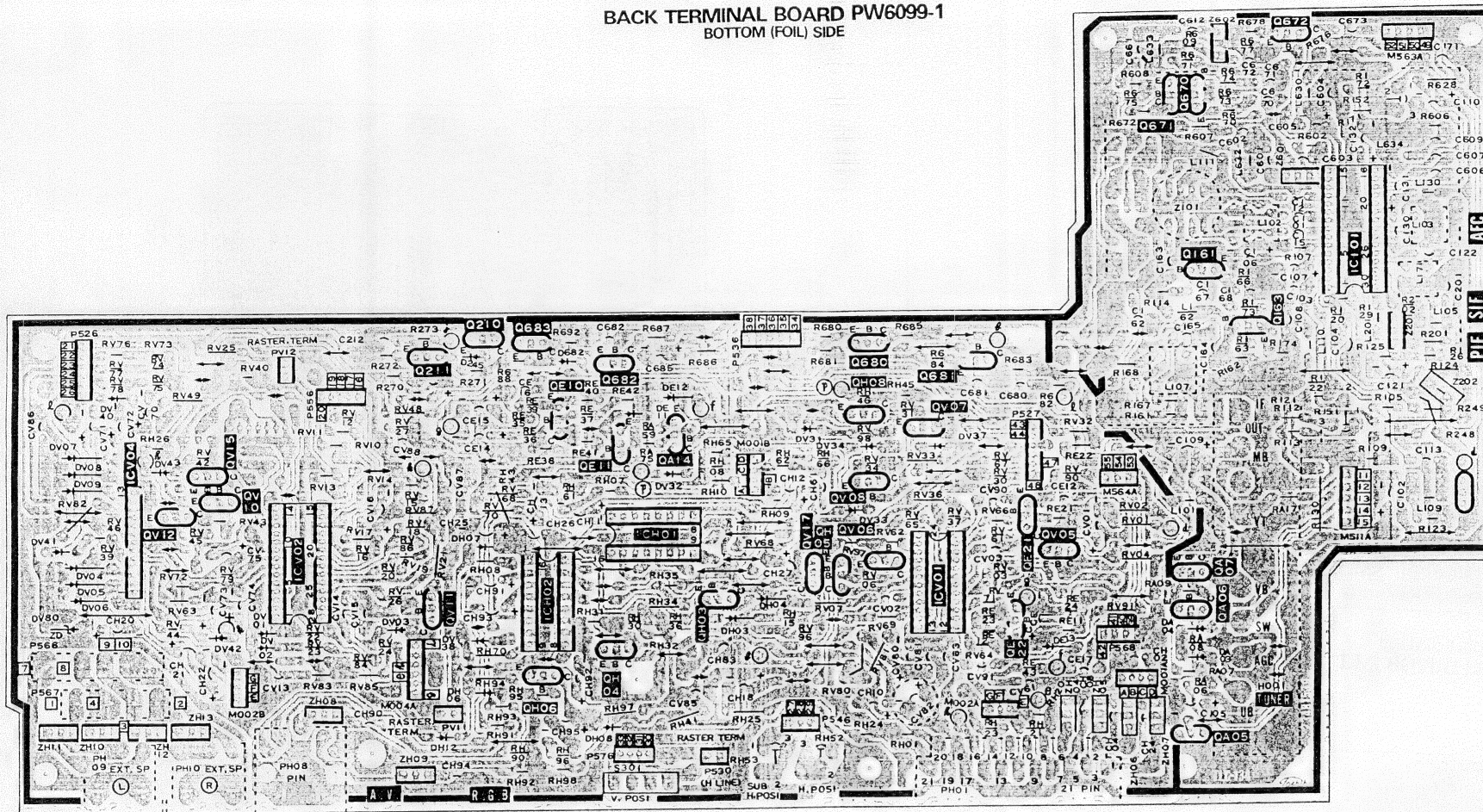


MAIN BOARD PW 6098-1  
BOTTOM (FOIL) SIDE

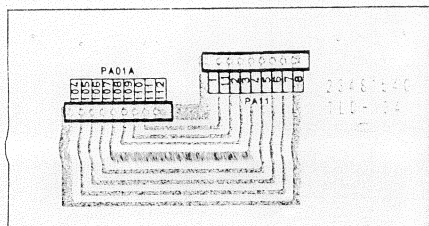




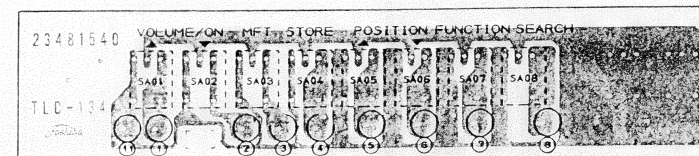
BACK TERMINAL BOARD PW6099-1  
BOTTOM (FOIL) SIDE



CONNECTOR BOARD PW6100-4  
BOTTOM (FOIL) SIDE



CONTROL BOARD PW6100-3  
BOTTOM (FOIL) SIDE









**IMPORTANT SAFETY NOTICE**

Component marked with the International Hazard Symbol must, if changed, be replaced by an approved type and must be mounted as the original. This will ensure that the safety standards adhered to during manufacture will be maintained following any servicing procedure.

**OBSERVATION OF VOLTAGES AND WAVEFORMS**

1. Voltage readings were obtained using a high impedance digital voltmeter.
2. (—) or ground lead of instruments should be connected to the ground marked (⊥) in the schematic on checking Non-isolated circuit surrounded by mark but should be connected to the points marked (⌚) on checking isolated circuit.
3. The voltage readings may vary as much as  $\pm 20\%$ .
4. Check that the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for the best picture, making sure that the Contrast, Brightness and Colour controls are set near to their mid-positions.
5. The waveforms were taken using a standard colour bar signal and were observed using a wide band oscilloscope via a low capacity probe.

**NOTES:**

1. This circuit diagram is subject to change without notice.

**EXPRESSION****VALUE OF RESISTOR, CAPACITOR and INDUCTOR**

1. Resistance is shown in ohm, k=1,000, M=1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in  $\mu\text{F}$  and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in  $\mu\text{H}$ , and the values less than 1 in H.

**GROUNDING SYMBOL**

1.  $\perp$ : Non isolated ground,  $\text{⌚}$ : Isolated ground.

**RESISTORS****Prefixed to values:**

TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

**Suffixes to values:**

TOLERANCE	MARK
$\pm 1\%$	(F)
$\pm 2\%$	(G)

**Suffixes to VR values:**

LAW	MARK
Linear	(B)
'C' Curve Characteristic	(C)

**Rating Markings:**

WATTAGE	MARK
1/6W	
1/4W	
1/2W	
1W	
2W	

WATTAGE	MARK
3W	
5W	
10W	
15W	
20W	
25W	

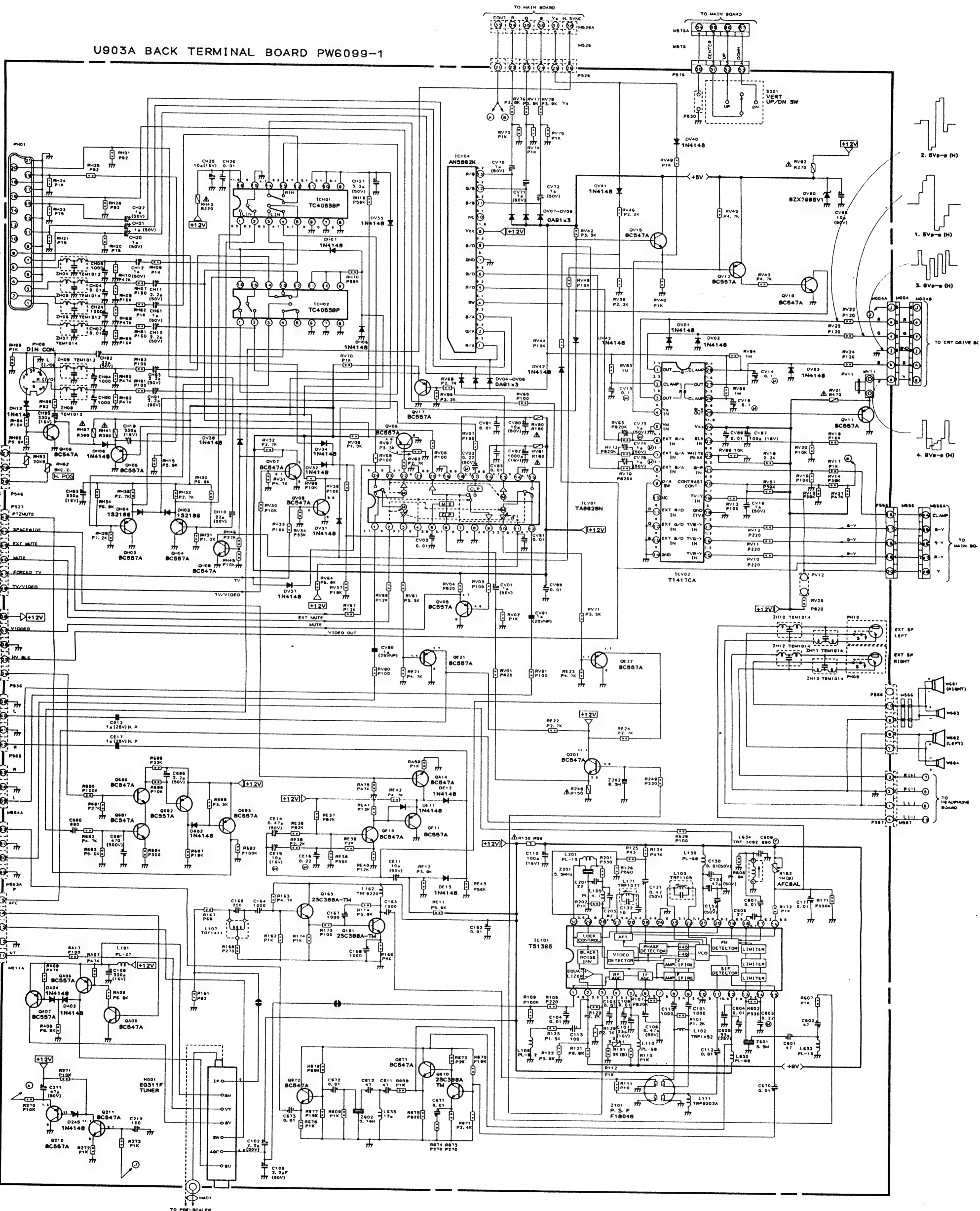
**CAPACITORS****Rating Markings:**

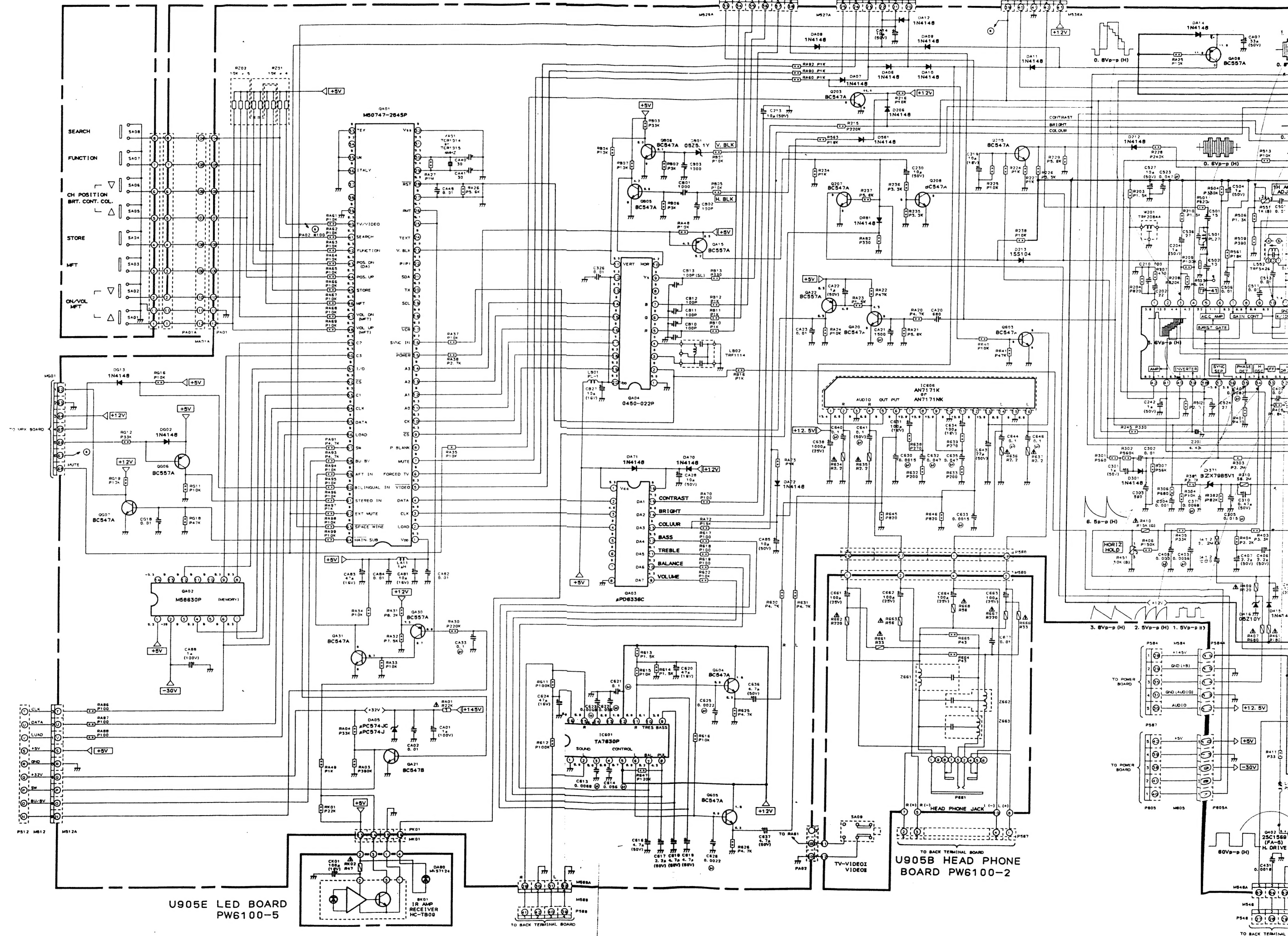
Type	Mark
Ceramic Disc 50V Only	
Electrolytic	
Electrolytic Non-Polar	
Variable Capacitor	
Other	



# U903A BACK TERMINAL BOARD PW6099-1

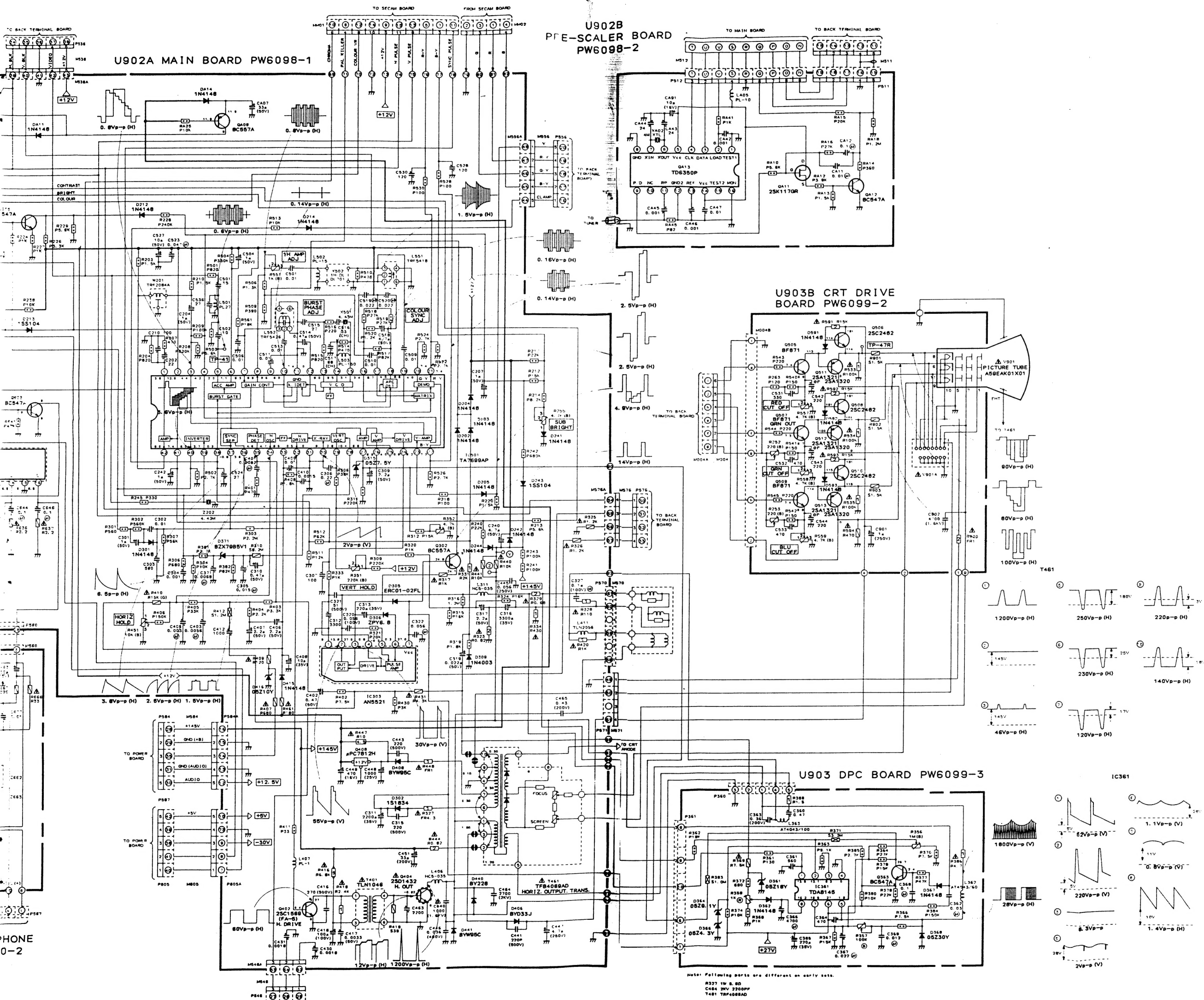
21	SHIELD	EARTH
20	VIDEO IN	1Vpp±30%
19	VIDEO OUT	1Vpp±30%
18	RAPID BLK	0-0.4V
17	RAPID BLANK	1.1-3V
16	VIDEO EARTH	
15	RED IN	0.7Vpp±30%
14	NC	
13	NC	
12	NC	
11	GREEN IN	0.7Vpp±30%
10	NC	
9	GREEN EARTH	
8	EXT. TV	1V±0.1V
7	BLUE IN	0.1Vpp±30%
6	AUDIO IN (L)	0.2-2Vrms
5	BLUE EARTH	
4	AUDIO OUT (L)	0.2-2Vrms
3	AUDIO IN (R)	0.2-2Vrms
2	AUDIO OUT (R)	0.2-2Vrms





U905E LED BOARD PW6100-5

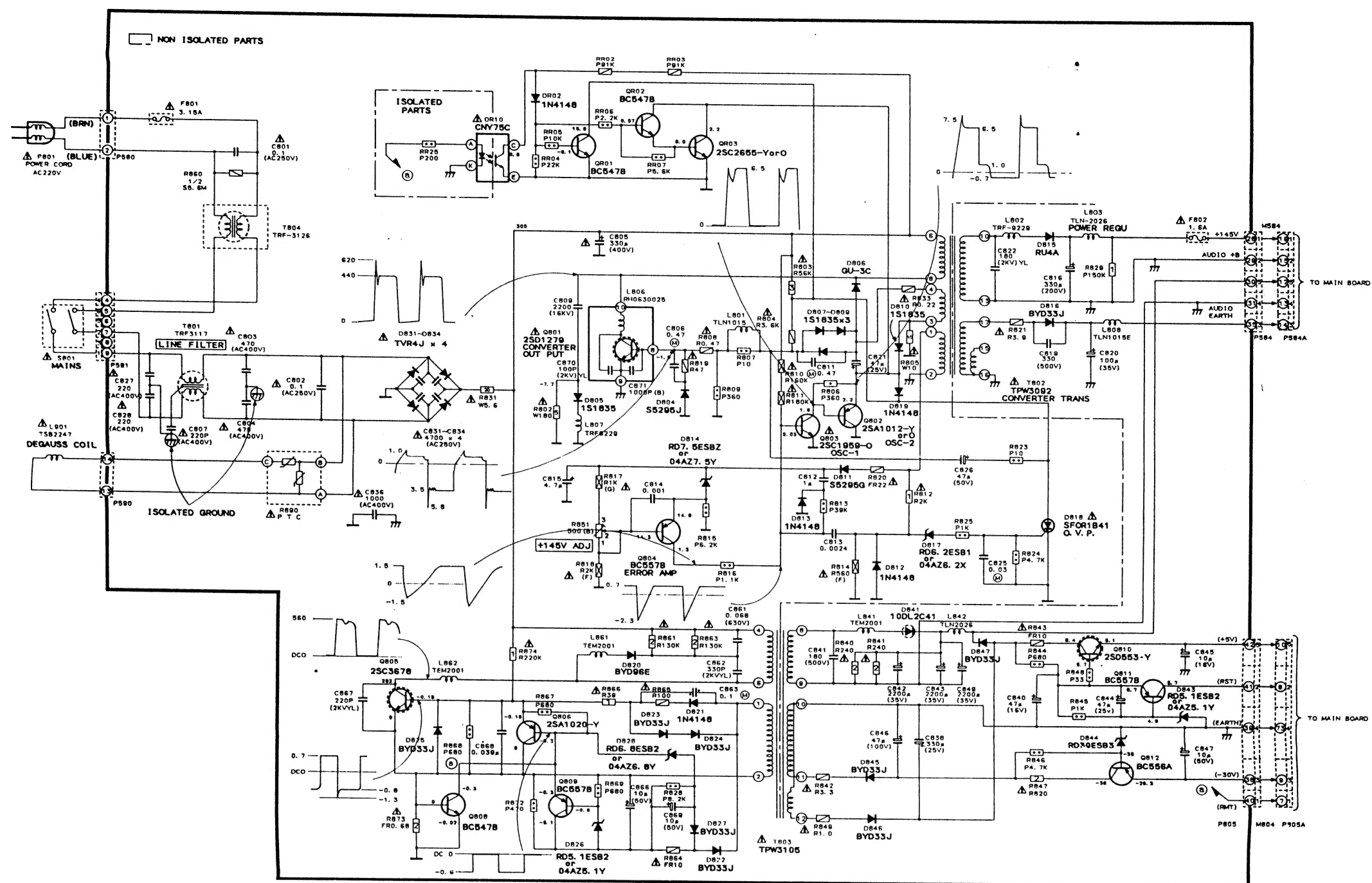
U905B HEAD PHONE BOARD PW6100-2



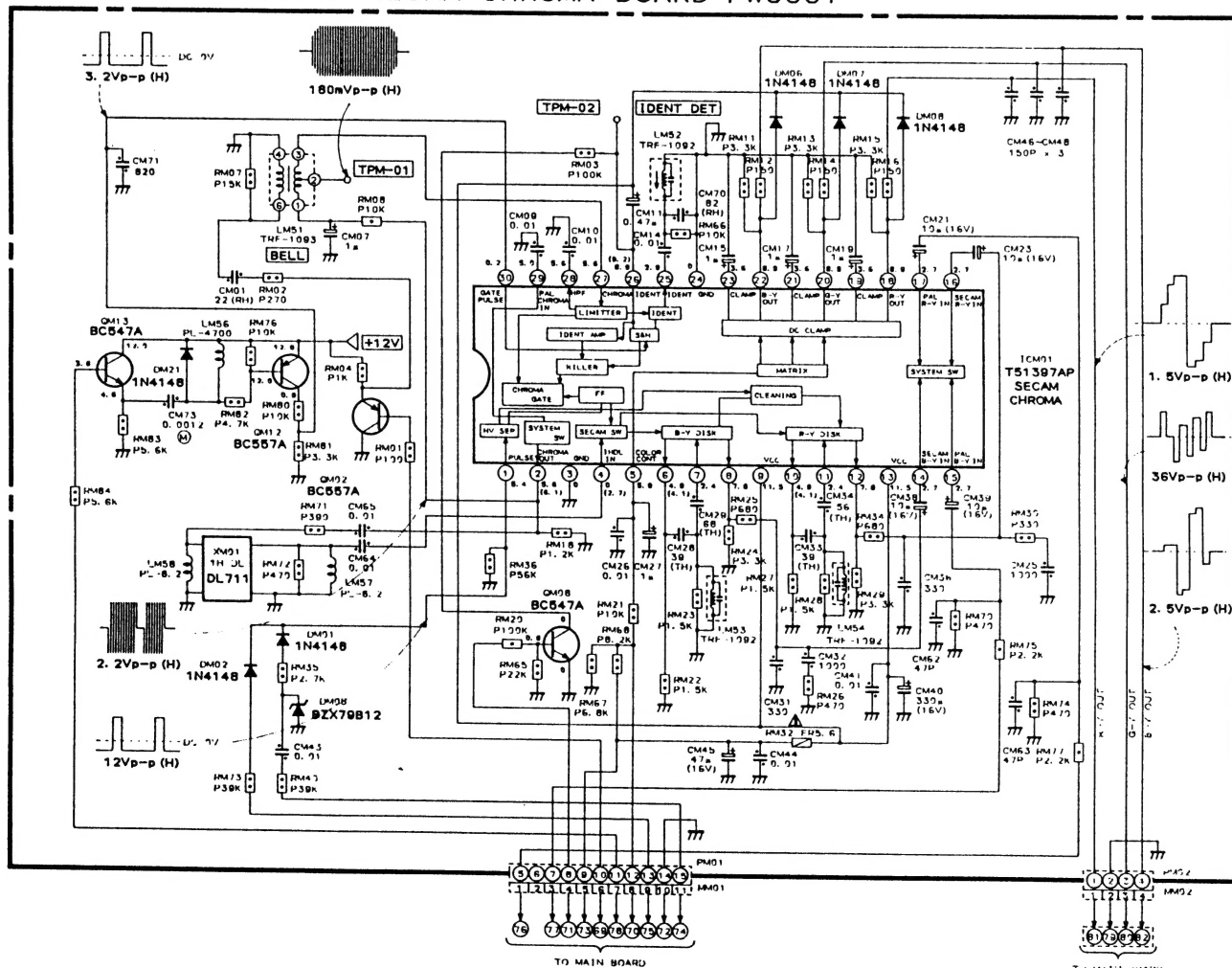
**Note: Following parts are different on early sets.**

R327 1W B. 5D  
C484 2KV 2200PF  
T481 TRF4068AD





U501A SECAM CHROMA BOARD PW5631



TO BACK TERMINAL BOARD

1	2	3	4
52	51	50	49

M563A

4	3	2	1
58	61	60	59

M563

P563

